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A PRACTICAL

Course of Lectures

ON URINARY DISORDERS;

EMBRACING THEIR

DIAGNOSIS AND MEDICAL TREATMENT.

Illustrated by numerous Engravings, displaying the Principal Forms and Modifications of Urinary Deposits.

By A. H. HASSALL, M.D., F.L.S.,

PHYSICIAN TO THE ROYAL FREE HOSPITAL, AUTHOR OF "FOOD AND ITS ADULTERATIONS," ETC.

ON THE DISCRIMINATION OF CERTAIN ORGANIZED AND UNORGANIZED MATTERS AND PRINCIPLES.

On the Determination of Fatty or Oily Matter.

URINE containing fatty or oily matter is usually, but not always, more or less turbid, and if the fat occur in connexion with chylous matter, it will not only be turbid, but it will possess a whitish and milky appearance more or less marked. Usually when a drop of such urine, especially if it has been allowed to stand at rest for some time, and if it be taken from the surface, is examined under the microscope, droplets or spherules of oil will be seen, which are readily distinguished by their strongly refractive properties, as well as by their solubility in ether.

Should the presence of fat be suspected, and no globules of oil be visible under the microscope, a portion of the urine should be agitated with ether, which will dissolve out any oily or fatty matter which may be present, and which may be obtained in a separate state on the evaporation of the ethereal solution.

That the substance thus obtained consists really of fat is known by its greasy appearance, its insolubility in cold water, by its breaking up into droplets when agitated with hot water, and its solubility in ether.

It is not very often that a urine is met with containing only fat, for when this is present it is usually derived from chyle, some of the constituents of which are generally present in the urine with it.

But minute quantities of fat may be present in urine, independent of chyle, as in certain forms of Bright's disease, and also without occasioning the slightest turbidity. In this case, the fatty matter is found in the cells and renal casts thrown off, and which have become deposited from the urine after it has stood for some hours.

The microscope affords the only means by which the presence of oily matter in connexion with the renal cells and tubules can be ascertained.

In the Mauritius, fatty urine is epidemic, and it accompanies a peculiar form of irritative fever.

A peculiar kind of fatty matter, to which its discoverer, Dr. Florian Heller (Heller's Arch., 1844 and 1845), gave the name of *uro-stealith*, has been detected in one instance in the urine. The patient, a weaver, twenty-four years of age, laboured under all the symptoms of calculus, and passed some small concretions, which, on examination, were found to be composed of the peculiar fatty matter in question. These concretions possessed the following characters:—When fresh, they were soft, becoming, when dry, hard, yellow, wax-like, brittle, and amorphous, and presenting by transmitted light a greenish-yellow colour. On the application of heat, they puffed up, inflamed, emitted a peculiar pungent odour, between that of shellac and benzoin, and left a voluminous ash. In hot water they softened, but did not dissolve; they were readily soluble in ether; the residue, on the evaporation of the etherial solution, assumed a violet colour. On the application of a gentle heat, nitric acid dissolved them with a slight effervescence, forming a colourless substance.

On the Determination of Fibrin.

Fibrin is distinguished from albumen by its undergoing solidification when effused from the bloodvessels. It usually occurs in the urine in connexion with blood, but not always so. Sometimes it exudes from the bloodvessels of the kidneys, and solidifies in the renal tubules, in the form of casts. In other, but very rare cases, the effused fibrin does not solidify until after the urine has been voided.

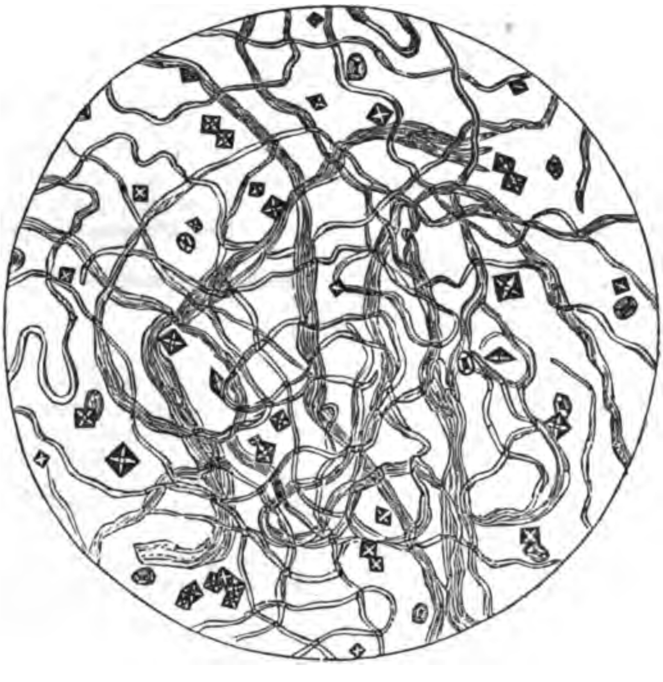
When the fibrin solidifies in the kidneys, the casts are usually met with in the urine. Whenever, then, these casts are observed under the microscope, or the urine becomes at all gelatinous on cooling, and this whether it contain blood or not, fibrin is present.

Now, almost constantly, albumen is voided at the same time with the fibrin: whenever, therefore, the latter is present in the urine, the former is almost sure to be found.

The principal forms of renal tubules and fibrinous casts observed in the urine are represented in the engraving (Fig. 18).

There is a form of deposit of frequent occurrence in the urine, with which I have been familiar for years, and which, since it bears much resemblance to a renal cast, may here be noticed. It consists of long threads of very variable diameter, but which are all more or less striated, showing that they are made up of fibrillæ of fibrin. I have met with them in the greatest abundance in urines depositing oxalate of lime; also in those containing excess of earthy phosphates and mucus, or which contain semen; indeed, I have found them to occur wherever irritation of the bladder from any cause exists, and as an evidence of which irritation they are to be regarded. They are found alike in the urine of men and women, (Fig. 19.)

FIG. 19.



COMPOUND FIBRILLÆ OF FIBRIN, intermixed with octohedral and dumb-bell crystals of oxalate of lime, from human urine, depositing oxalate of lime. Magnified 220 diameters. July 6th, 1858.

On the Determination of Keistein.

Another substance of great interest, met with in the urine of pregnant women, and with the characters of which it is necessary to become acquainted, is that known by the names of keistein and gravidine.

After the urine of a pregnant woman has been exposed to the air in a cylindrical glass vessel for two or three days (and never later than the sixth day), a fatty-looking pellicle forms upon the surface, which at the end of two or three days, when the urine is becoming alkaline, gradually breaks up, and falls to the bottom as a sediment, frequently evolving at this stage a powerful odour of cheese.

This scum or pellicle, viewed under the microscope, is seen to be constituted of three distinct elements, and to consist of a granular base in which are imbedded well-defined crystals of the ammonio-magnesian phosphate, and droplets of oil. The only essential and distinctive constituent of keistein is therefore the granular matrix. This is not acted upon by acetic acid, but is dissolved by ammonia, and this it is that evolves during decomposition the cheesy odour above referred to. When this scum is collected in any quantity, it presents a greasy and opaque appearance, resembling spermaceti, arising partly from the large quantity of triple phosphate present.

The triple phosphate may be dissolved out by means of acetic acid, and the oil by ether; the cheese-like substance being left behind.

The scum of keistein is distinguished from the ordinary phosphatic crust or scum, not only by the presence of oil and the casein or cheesy substance, but also by its not remaining on the surface beyond three or four days from its complete formation.

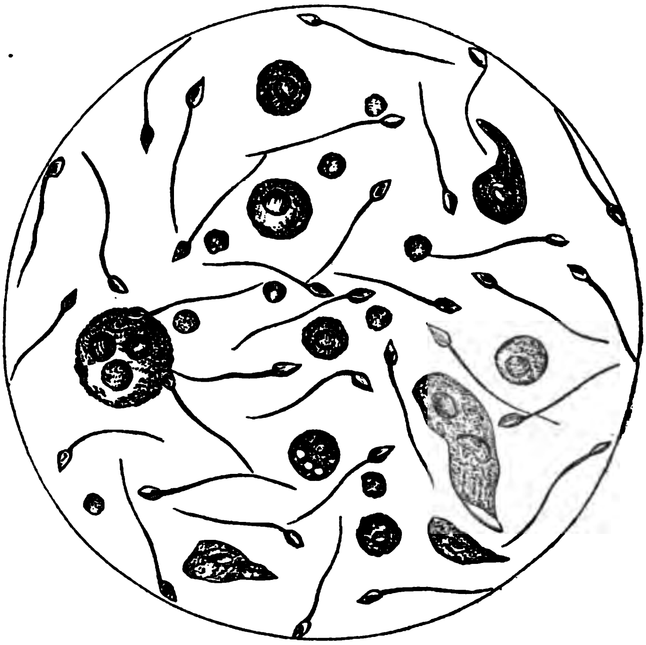
The urines on which keistein is formed rarely become turbid on boiling, or throw down any deposit on the addition of nitric or acetic acid, showing the absence of albumen but not necessarily that of casein, since this would not be precipitated by acetic acid unless it were present in large amount.

On the Determination of Blood.

When blood is contained in urine in amount at all considerable, its presence is sufficiently indicated by the eye alone. The urine will be observed to possess a reddish colour, and if it be set aside for some time, a reddish or rust-coloured precipitate will subside, the presence of which is so peculiar that it cannot be confounded with any other coloured deposits which occur in the urine, as uric acid and the urates.

Moreover, if the quantity of blood be very considerable, the urine will become more or less gelatinous, and if a portion of it be boiled, it will be found to abound in albumen.

FIG. 20.



SEMINAL ANIMALCULES, intermixed with *seminal corpuscles* and *vesical epithelial scales.* (Magnified 900 diameters.)

When the quantity of blood is very minute, the microscope affords the only ready and certain means of determining its presence. By this instrument, if the urine be fresh, the presence of the red and white corpuscles of the blood will be revealed in any sediment from urine which has been allowed to remain at rest a sufficient time. If the hæmorrhage proceed from the kidneys, casts, containing blood corpuscles, are sometimes met with. (See Fig 18.)

On the Determination of Bile.

When bile is contained in urine in considerable quantity, its presence is sufficiently indicated by the colour of the urine; this is especially the case in jaundice, in which the urine usually possesses a dark-yellowish-green or brown colour, which is exceedingly characteristic.

When the quantity of biliary matter in the urine is less, the tint of the urine is only deepened and rendered of a brown or reddish hue. When this is the case, it becomes necessary to seek for the presence of bile, for which there are several tests.

One of these is Pettenkofer's test, which consists of sulphuric acid, free from sulphurous acid, and sugar. It is used as follows:—

To a small quantity of the urine in a test-tube, about two-thirds of the bulk of sulphuric acid is to be added, drop by drop, so that the temperature of the mixture may not be raised above 144° Fahr., at which the colour characteristic of bile is destroyed.

To this mixture a grain or two of sugar or syrup is to be added, the whole shaken, and then allowed to stand at rest for a few minutes. Should bile be present the liquid will have assumed a more or less intense red colour with a tinge of violet. This remarkable development of colour is not due to any change effected in the colouring matter of the bile, since it takes place equally when the above reagents are added to a solution of decolorized bile.

Should the suspected urine contain albumen, this should be first removed by coagulation and filtration, because with albumen and sulphuric acid and sugar a nearly similar colour is developed.

If the quantity of bile present be very small, the urine should be evaporated to dryness on a water-bath before the test is tried, and the bile dissolved out either by means of a little water or alcohol.

Another test for bile, is that commonly known as Heller's test, which is thus employed:—

A little white of egg is added to a small quantity of the suspected urine, and after the mixture has been well shaken, a few drops of nitric acid: this causes the precipitation of the albumen, in combination with some of the colouring matter of the bile, the precipitated albumen thereby assuming a dull-green or bluish colour.

When the quantity of bile is very small, the urine should be evaporated as before, and the albumen added to the aqueous solution.

A third test for bile in urine depends upon the action of nitric acid upon the brown colouring matter of the bile, called biliphœin. Two or three drops of nitric acid are to be allowed to fall upon a little of the urine spread out in a thin layer on a white surface. When bile is present in amount at all considerable, the mixture assumes a variety of changing and evanescent tints, green, violet, yellow, and pink; the latter colour usually predominating. As in the case of the previously-described tests, should the quantity of bile present be very small, the urine must be evaporated before the nitric acid is added.

According to the late Dr. Golding Bird it occasionally happens that bile exists in urine in a modified, and, perhaps, oxidized state, in which it does not exhibit, with the tests above noticed, the characteristic reactions, the urine becoming merely imperfectly reddened. Ammonia, Dr. Bird states, then becomes a valuable test, it immediately producing a deep red colour. There are certain fallacies attending the ammonia test, arising chiefly from the presence of vegetable colouring matters in the urine, as those of rhubarb and senna, and on which ammonia acts in a nearly similar manner.*

Lastly, there is the microscopic test, which has already been described, for bile when present in urine in small quantities.

On the Detection of Seminal Fluid.

In some cases a mucus-like deposit occurs in urine, which, on examination with the microscope, turns out to be semen; this is shown by the presence of the well-known seminal animalcules and corpuscles. The animalcules are nearly always dead, owing, perhaps, partly to the length of time which usually elapses before the urine is examined, and partly to the injurious action exerted upon them by the urine itself. Spermatic animalcules are occasionally seen in urine in small number where there is no visible deposit.

Mixed up with the spermatozoa, octohedral crystals of oxalate of lime are frequently noticed. Some observers have gone so far as to state that whenever these crystals occur in urine, spermatic fluid is always present, a statement which is certainly erroneous. (Fig. 20.)

In bringing to a conclusion the account of the analysis of the urine, the processes given by Dr. Marcet* for the extraction of "*Two new acids from the human urine*" may here be described. He succeeded in procuring them, he states, whilst engaged in some researches in regard to the immediate principles of healthy urine in Messrs. Robin and Verdeil's Laboratory at Paris.

"After the extraction of the urea by the addition of ether to the alcoholic solution of dried urine, the strongly acid mother liquid is evaporated at a low temperature, baryta water being previously added, to avoid the decomposition of the organic substance contained in the solution. The acids are then set free by the addition of sulphuric acid in excess to the remaining aqueous solution, which is shaken in a flask with alcohol and ether, and allowed to stand; after a few minutes the ether rises to the surface possessing an acid reaction, though not from the presence of the sulphuric acid, as it remains, with the small quantity of urea left behind by the first operation, dissolved in an inferior layer of water. The supernatant ethereal solution is decanted and repeatedly washed with water and alcohol, ether being occasionally added to supply the deficiency caused by evaporation during the above-mentioned process. An acid solution in ether is finally obtained quite free from urea and sulphuric acid, and remarkable for its beautiful pink colour when observed under transmitted light. This solution is decanted for the last time through a filtering funnel, the inferior layer of water being allowed to run out; and the acid ether is then submitted to a slow evaporation at the temperature of the atmosphere. Twelve hours afterwards the remaining liquid is found covered with prismatic colourless needles, which can be collected and dried upon filtering paper; the sides of the vessel are occupied by the deposit of an amorphous pink substance.

"*First Acid.*—The crystalline substance, when examined under the microscope, appears to assume the form of oblique rhombohedra or of prisms derived from that type, aggregating occasionally in stellate groups, but generally branching off from a main crystal or long prism. They transmit readily polarized light. This substance is soluble in ether, alcohol, and boiling water; it imparts to its solution an acid reaction, and can be again obtained crystallized by concentration. When heated upon a platina spatula, the crystals fuse, emitting a peculiar smell different from that of hippuric acid, and after charring without taking fire, finally disappear, leaving no residue. This substance, therefore, is not *hippuric acid*, to which, however, in many respects, it bears great analogy.

---

* Urinary Deposits, 4th Edition, p. 385.

* British and Foreign Medico-Chirurgical Review, vol. xi. p. 370, 1853.

"*Second Acid.*—The pink deposit which occurs on the sides of the vessel during the evaporation of the mother liquor, has a very strong acid reaction: after standing for a week, it is found to contain colourless concentric groups of radiating crystals; but the very small quantity obtained did not admit of their minute examination. Robin considers the pink amorphous sediment as *urrosacine*, or the colouring principles of urine obtained by Dr. Harley. This pink substance is soluble in ether and alcohol, but not in water. Its smell is peculiarly aromatic, increasing when exposed to heat on a platina spatula; it chars, emitting an odour of burnt oil, and leaves no appreciable fixed residue. We have not observed whether iron is present."

The second acid, doubtless, consists chiefly of the urine pigment; and to the account given of its extraction, we may add the process described by Dr. Harley,* by whom it has been obtained in a pure state, and who has bestowed upon it the name of "*Urrosacine.*"

"A large quantity of urine is evaporated almost to dryness over the water bath; the salts which have crystallized being removed, the colouring matter is extracted by means of boiling alcohol; the alcoholic dark-red extract is then boiled, with hydrated lime added in small quantities at a time till the liquid becomes colourless. The whole is then thrown on a filter, and the compound of lime and the colouring matter thoroughly dried and washed with boiling ether, to remove any fatty substance which may be present. The lime compound is again treated with hydrochloric acid to set free the colouring matter, and afterwards with alcohol. The alcoholic solution, mixed with an equal quantity of ether, is allowed to stand for some days, and, water being added, the ether containing the colouring matter floats on the surface and is readily removed. The solution is of a port-wine colour, and still contains a little hydrochloric acid, which is removed by distilled water added to the ether in a filtering funnel stopped by the finger, so that the water at the boiling of the former is easily withdrawn by partially removing the finger. This and the after-distillation leave a pigment, which, when dried, is brownish-black, and presents a glistening appearance. This pigment, on being burnt, evolves an odour similar to burning bone, and leaves an ash which contains iron; it is composed not only of carbon, hydrogen, and oxygen, but also of nitrogen, and is obviously allied to hæmatin, bile pigment, and melanin."

I regret to have been obliged to occupy so much space in detailing the foregoing somewhat full, but at the same time tolerably clear and simple account of the characters and properties of the urine, its composition and analysis. But the details into which I have thus entered appeared to me for the most part indispensable; for unless we are fully acquainted with the composition of the urine, and the processes adopted for the detection of the more important constituents present in it under different circumstances, it will be impossible for us to discover the many deviations of composition to which the urine is liable, arising either from functional derangement or disease.

The principal facts relating to the composition and analysis of the urine being mastered, the path before us is made clear and comparatively easy, and I shall not again often have occasion to draw attention to descriptions of methods of analyses, but shall for the most part have simply to refer back to those which have already been described.

ON UREA.

Most of the works published in this country on the pathology of the urine treat principally of those constituents, or substances, which occur as *precipitates* or *deposits*, passing over, almost completely, those other substances equally numerous and equally important, which do not form deposits, but which, under all circumstances, are held in solution in the urine. The consequences of this proceeding are, that while the works hitherto published on this subject are very incomplete, and that while undue prominence is given to certain constituents, others, perhaps of more importance, are either treated of superficially, or are altogether neglected. Thus, while uric acid and oxalate of lime deposits are described at length, urea, creatine, creatinine, &c., are dismissed with a few words. Of the truth of these remarks further examples will be afforded in the course of these Lectures.

Another defect in most of our existing works is, that the several substances are treated of without regard to the natural order or affinities which they exhibit towards each other; and hence the natural relation which they bear towards each other is too often overlooked.

The first class of urinary elementary principles of which I propose to treat, comprises urea, creatine, creatinine, and cystine; these form a very natural group, characterized by several peculiarities possessed in common by these substances; thus they are all of quaternary or quinquennary,—as in the case of cystine—composition; they all contain nitrogen, are crystallizable, either neutral or alkaline, and when destroyed, they give rise to empyreumatic, azotized, or ammoniacal products, and when incinerated, they do not leave any ash; further, they are all strictly *excrementitial.* The alkaloids of the vegetable kingdom, as quinine, theine, strychnine, &c., are substances of analogous composition and affinities.

---

* Pharmaceutical Journal for November, 1858.

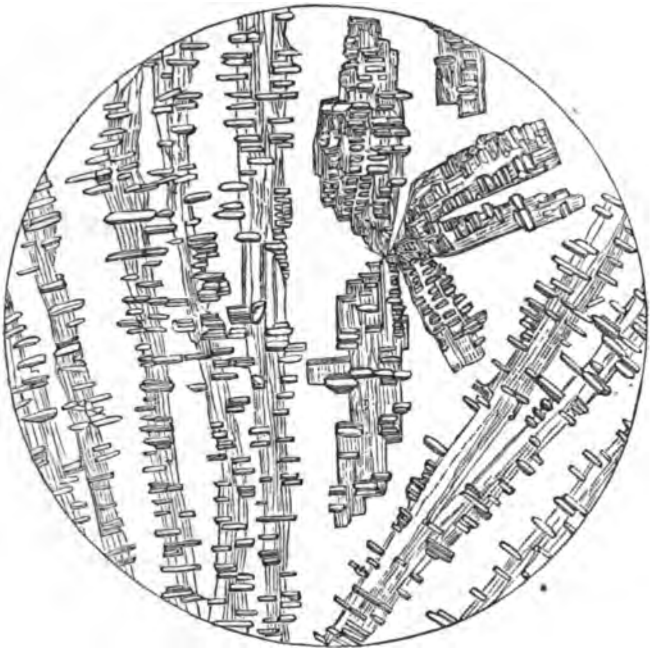
Urea was first discovered in the urine. This discovery was made in 1771 by Rouelle le Cadet, but it was MM. Fourcroy and Vauquelin who gave it the name of urea—a name suggested by the word urine, and bestowed upon it in consequence of its being the most abundant and distinctive of the constituents of that fluid.

Urea exists in the blood of man, of the carnivora, and in smaller quantity in that of the herbivora. In the carnivorous birds, in serpents and insects, uric acid predominates, and in some cases almost entirely replaces the urea. It is from the blood, as will be shown hereafter, that it is separated by the kidneys.

Urea has been met with, not only in the blood and urine, but also in several of the other organic fluids, both normal and pathological, as in the aqueous and vitreous humours of the eye, in the sweat, the saliva, the *liquor amnii;* in the vomited matter of persons suffering from retention of urine, or labouring under Bright's disease; in the serosity of certain dropsies resulting from different forms of the same disease, and in the fluid of the ventricles of the brain in a case of albuminuria.

It is, however, in the urine that this principle has been chiefly studied, and that its occurrence is of most importance. Some idea of the importance of this principle may be formed, when we consider that about five-sixths of the nitrogen consumed escapes from the body in the form of urea, and that a healthy man passes on an average nearly half an ounce daily.

FIG. 22.



Long needle-like crystals of UREA, crossed at right angles with other prismatic crystals, consisting probably of *creatine,* from two or three drops of human urine evaporated on a glass slide. (Magnified 100 diameters.) 1850.

Causes of Variation in the Amount of Urea excreted.

The quantity of urea contained in the renal secretion varies greatly, there being several cases of variation.

First, the quantity varies according to the degree of *dilution or concentration of the urine;* in other words, according to the quantity of water which it contains. The urine passed after partaking freely of liquids is of a low specific gravity, and of course contains but little urea; while, on the contrary, that which is voided after a long absence from fluids, or at long intervals, and after copious perspirations, is of high specific gravity, and contains usually much urea.

Other modifying circumstances depend on *sex* and *age:* the amount is usually greater in the urine of men than of women; in those of middle life, than in the aged. Becquerel found the ratio of urea excreted in twenty-four hours by women, to that of men, as 15·582 to 17·537 grammes. This same chemist also states that the urine of children contains less than that of man—a conclusion opposed to the more correct result obtained by Scherer, Rummel, and Bischoff. Scherer found that the urine of young children, on an average, contained $1·7\frac{0}{6}$ gramme, whilst he found only $1·25\frac{2}{3}$ in the twenty-four hours' urine of a man aged twenty-two years. The following table represents the average results of the experiments of M. Lecanu on the quantity of urea and uric acid excreted in twenty-four hours at different ages :—

	Urea.	Uric Acid.
Adult men	431·9 gram.	1·309
Adult women	294·2 „	1·001
Very old men (84 to 86)	124·8 „	·677
Children (under 8) ..	138·2 „	·398

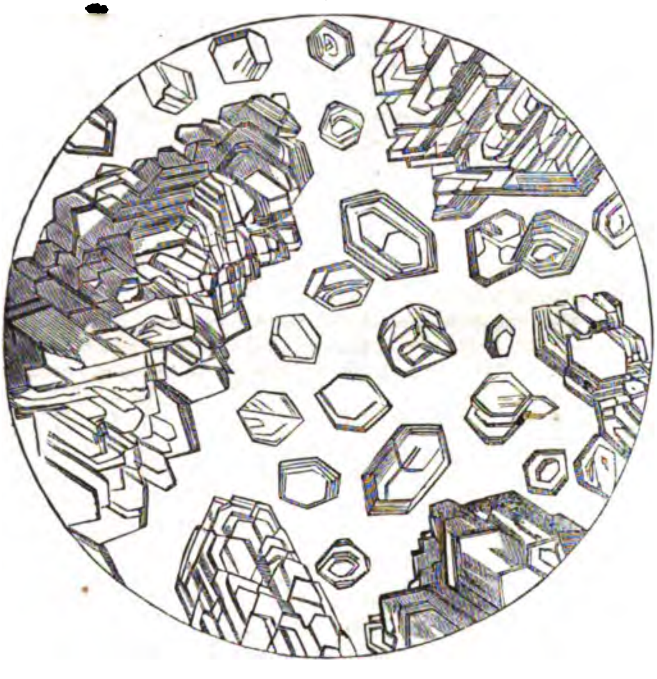
The subjoined table, abridged from Dr. Day's paper on Urology in the *Medico-Chirurgical Review*, is computed from the inquiries of Scherer and Rummel :—

	3 yrs.	3½ yrs.	4 yrs.	5 yrs.	7 yrs.	18 yrs.	22 yrs.	31 yrs.	33 yrs.	65 yrs.
1000 parts contained—										
Urea...	15·34	17·19	20·25	26·11	16·98	14·61	12·52	16·44	16·98	7·82
In 24 hours there were discharged in grammes*—										
Urea...	13·57	12·98	15·59	18·22	18·29	36·52	27·003	39·28	29·824	19·17
For every lb. weight of the body there were excreted, in 24 hours, in grammes—										
Urea...	0·526	0·447	0·605	0·607	0·457	0·347	0·241	0·288	0·288	0·184

Bischoff has made some observations deserving of special notice upon the normal quantity of urea excreted at different ages. The results of his inquiries arc as follows :—

	A	B	C	D	E
	3 yrs. 32 lb. Boy.	16 yrs. 97 lb. Lad.	18 yrs. 132 lb. Girl.	45 yrs. 179 lb. Woman.	45 yrs. 215½ lb. Man.
Urea in 24 hours ..	4·27	19·86	20·19	25·33	37·70
Percentage of Urea	1·99	2·70	2·83	2·67	2·07
Daily quantity of urea for 1 lb. of weight of body	0·266	0·204	0·153	0·14	0·175

FIG. 22.



Crystals of NITRATE OF UREA. (Magnified 100 diameters.)

It thus appears that, weight for weight, the urine of children contains nearly twice as much urea as that of adults, and that, combining the results of Scherer and Rummel, we may conclude that men in the prime of life excrete over 500 grains of urea in the twenty-four hours.

Again, it varies according to *constitution*, the quantity being greater in the stout, muscular, and plethoric, than in the thin, anæmic, and nervous.

Another circumstance which exercises a very marked effect on the amount of urea excreted is the *quantity and kind of food* consumed. Lehmann, from experiments on himself, found that on a purely animal diet, or on food very rich in nitrogen, there were often two-fifths more urea excreted than on a mixed diet; whilst on a mixed diet there was almost one-third more than on a purely vegetable diet; and, lastly, on a non-nitrogenous diet the amount of urea was less than half the quantity excreted during an ordinary mixed diet. "On a well-regulated mixed diet," says Lehmann, "I discharged in twenty-four hours 32·5 grammes of urea (I give the mean of fifteen observations); on a purely animal diet, 53·2 grammes (the mean of twelve observations); and on a vegetable diet, 22·5 grammes (the mean of twelve observations); and on a non-nitrogenous diet, 15·4 grammes (the mean of three observations)."

[These results will be better appreciated as exhibited in the following table, in which the grammes are reduced to grains :—

---

* 15·4336 grains.

	Animal diet.	Vegetable.	Mixed.	Non-Nitrogenized.
Urea in the urine of 24 hours	819·2	346·5	500·5	237·1]

"It is especially worthy of remark that the augmentation of the urea in the urine occurs very soon after the use of highly nitrogenous food, and that in those cases often five-sixths of the nitrogen taken in the food in twenty-four hours are eliminated as urea by the kidneys.

"When I took thirty-two boiled hen's-eggs daily, I consumed in them about 30·16 grammes of nitrogen; but in the above-mentioned quantity of urea, I discharged only about 25 grammes in twenty-four hours. On the morning following the day on which I had taken only flesh or eggs, the urine was so rich in urea that immediately on the addition of nitric acid it yielded a copious precipitate of nitrate of urea.

"Notwithstanding the considerable influence which the nature of the food exerts on the quantity of urea excreted by the kidneys, there is as much urea after prolonged abstinence from all food (after a rigid fast of twenty-four hours), as after the use of perfectly non-nitrogenous food.

"Lassaigne found urea in the urine of a madman who had taken no food for fourteen days; and we observe something similar almost daily in patients with typhus fever and other diseases, who for fourteen days or more have taken nothing but an oily emulsion or an emollient decoction, and yet always pass urine containing urea, and often rich in it. After living for three days on a perfectly non-nitrogenous diet, I still found in the morning urine more than 1⅝ of urea."*

Again, M. Bernard has shown that during abstinence urea exists in proportionally larger quantity than in the ordinary state, and that amongst the carnivora it is the uric acid, and not the urea, which disappears by abstinence.†

The researches of Lehmann as to the effects of food on the urea, are fully confirmed by Bischoff; indeed the latter experimenter shows that they are even greater than had been previously supposed. Thus, for instance, one of the dogs on which he experimented, when taking 4000 grammes of beef (freed from fat and bone) discharged 190 grammes of urea daily, and when fed on 500 grammes of potatoes and 250 grammes of fat, excreted not more than from six to eight grammes.

Another cause which increases the amount of urea excreted, is strong bodily *exercise;* but this cause of increase does not produce nearly so great an effect as does the kind and quantity of the food consumed. Lehmann ascertained, from numerous observations, that during his ordinary habits of life, he discharged about 32 grammes in twenty-four hours; but he found that, after strong bodily exercise, he, on one occasion, passed 36 grammes, and on another 37·4 grammes in twenty-four hours.

These experiments of Lehmann have been fully confirmed by the researches of Hammond, published in the *American Journal of Medical Science.* He determined the amount of urea in his own urine on three following days, the food and drink consumed being the same each day. The first day he took his ordinary exercise; the second he walked briskly eight and a half miles over a hilly country, rode ten miles on horseback, and pitched quoits for two hours and a half; while on the third day he rested continuously on a sofa for twenty-four hours. The results were as follows:

	Urea,	Uric Acid.
Moderate exercise	682·1 grs.	13·7 grs.
Increased exercise	865·0 "	8·2 "
No exercise . .	487·0 "	24·9 "

Again, variations in the amount of urea excreted are occasioned by certain salts and chemical substances. Thus, as shown by Bischoff, *chloride of sodium* or common salt increases the excretion of urea from, in the case of a dog, 23·50 to 28·34 grammes daily: *liquor potassæ,* Dr. Parkes has shown, has the same effect, as also have *cubebs* and *cantharides* (Sigmond); *urate of potash* (Woehler and Frerichs); and, probably, small doses of *tartrate of potash* and *soda* (Mellon and Laveran). On the other hand, *theine* and *caffeine, alcohol, fat,* as well as *phosphate of soda* (Böcker), diminish the amount of urea. *Gelatine* (Bischoff) greatly increases the urea. With the increase of urea, the urine pigment, the sulphates, the alkaline phosphates, and often the uric acid, according to Scherer, are also increased.

Lastly, it varies *in different pathological states or conditions and in different diseases,* as will be shown more fully hereafter. We may remark, however, that a diminution in the amount of urea excreted in disease more frequently occurs than an increase, this in many cases being dependent upon the low diet observed under treatment.

Quantity of Urea voided.

In estimating the quantity of Urea passed in any particular case, we must not operate upon a single sample, but the whole of the urine voided in twenty-four hours must be collected and measured, and the urea in a given amount of it being determined, the whole amount for the day may then be calculated. Again, it is often desirable in many cases, where strict accuracy is required, that the quantity of urea contained in different urines should be contrasted with the relative weights of the persons by whom they have been passed.

From the preceding considerations, it follows that the urea in the urine of the same individual is constantly subject to extensive variations, being scarcely ever the same in any two samples voided.

The varied processes by which the urea of the urine may be estimated have already been described, and will be found detailed in a previous number of The Lancet.

The *average quantity* of urea per 1000 parts of urine is ordinarily stated to vary between 25 and 32 parts, operating upon the urine of twenty-four hours. Lehmann states that the urine of a healthy man contains generally 2·5 to 3·2% of urea, and that the ratio of the urea to the other solid constituents is about = 9 : 11 or 7 : 9, and that a healthy man, in twenty-four hours, excretes from 22 to 36 grammes, a gramme being equal to more than fifteen grains.

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* Translation by Dr. Day, American edition, p. 151

† MM. Robin and Verdeil, loc. cit., tom. ii., p. 511.

The following determinations of the quantity of urea contained in different urines are taken from the work of MM. Robin and Verdeil:

Normal urine (Berzelius)	38·10	p. 1000
" " (Simon,) Sanguineous individual	12·46	"
" " (Ditto,) Bad Digestion	14·58	"
Morning urine, acid, (Simon,) Bad digestion	8·40	"
" " less acid, (Ditto,) " "	7·57	"
" " very acid, (Ditto,) " "	15·29	"
Normal urine (Lehmann)	31·45	"
" " (Ditto)	32·91	"
" " (Ditto)	32·90	"

	Mean.	Maximum.	Minimum.
Men (Lecanu)	28·0	33·0	23·1
Women (ditto)	19·1	28·3	9·9
Old men (ditto)	8·1	12·2	3·9
Infants of eight years (ditto)	13·4	16·4	10·4
" four years (ditto)	4·5	5·3	3·7
Fluid of hydropsy (Marchand)	—	0·42 per 100	
" "	—	0·50 "	
" "	—	0·68 "	

The following determinations have reference to the quantity of urea in the urine of animals:

Urine of the horse (Bibra)	12·44	per 1000
" " (ditto)	8·36	"
" " (Boussingault)	37·00	"
" diabetic horse (John)	33·30	"
" the ox (Sprengel)	40·00	"
" " (Bibra)	19·76	"
" " (ditto)	10·22	"
" the cow (Boussingault)	18·48	"
" goat (Bibra)	3·78	"
" " (ditto)	0·76	"
" camel (Brandes)	6·00	"
" pig (Boussingault)	4·90	"
" " (Bibra)	2·72	"
" " (ditto)	2·97	"
" hare (ditto)	8·54	"
Serum of blood of a cholera patient (Shaughnessy)	1·40	"

Wimpole-street, March, 1858.

Clinical Lecture

ON

PULMONARY HÆMORRHAGE.

By JAMES ALDERSON, M.D. F.R.S.,

SENIOR PHYSICIAN TO ST. MARY'S HOSPITAL.

Gentlemen,—There are at this time a number of cases in the wards, which form a group, displaying all the same formidable symptom of hæmorrhage from the lungs. Separately examined, these cases will also afford so many subjects for tracing the various causes whence that formidable symptom may arise. I shall preface what I have to say by a few general remarks on medical study which I conceive to bear especially on the interesting subject before us.

There are two methods by which we may study disease: one to consider the pathological condition of the organ in fault, and having fully understood it, then to observe the various symptoms consequent on the pathological change; the other is to bestow your primary attention on the symptoms of the case, and afterwards to investigate the several morbid conditions which may give rise to them. The first is a safe course of study, in which, as diligent pupils, you can scarcely lose your way. The second is a course still more needed for perfect information, but many students fail to gather the full reward of their industry by becoming unduly absorbed in the contemplation of symptoms; thus, by neglecting to seek for the original causes, they will fail to learn that there may be many for the same phenomenon. The danger of falling into this error is increased by the mode of pursuing medical science continually coming more in vogue—viz. the subdivision of medical labour, leading to what are called specialities. It is obvious that the eye long exercised on given subjects may perceive those points more clearly than a less diligently directed organ; but it is a psychological fact, that the mind, too much absorbed in one limited field of investigation, becomes narrowed in perception, and incapable of wider trains of reasoning. Now, we know that natural science is linked together by primary laws, some known, some yet to be discovered. It is plain, therefore, that comprehensive views of phenomena and their causes are needed in order to make any advance towards realizing truth. In practice, I would not deprecate undivided close attention to the nature and treatment of such organs as the eye and ear, because their special knowledge and special manipulation are required; but in the vast subject of internal disease, the habit of taking a wide view of all the distinctive features, and reasoning on them as a whole, cannot safely be surrendered to the narrower course of choosing some essential but limited train of symptoms for favourite contemplation. The progress of fashion is unfortunately dividing every organ, and even some particular derangement of the particular functions of every organ, into a separate subject for exclusive study. By this process, secondary symptoms are being continually exalted into primary diseases, tending, in many cases, to the neglect of vital phenomena, and in all to the obscuration of much pathological truth. The practical result is, the adoption and laudation of specifica.

The second course of study which I have alluded to, and which has given rise to these remarks on specialities, is, however, that which strictly belongs to clinical teaching. We will therefore pursue it, endeavouring to avoid the error of classing disease too much by symptoms, and too little by the causes.

The popular view of hæmorrhage from the

lungs refers it to the rupture of a bloodvessel; it is also the common belief that such hæmorrhage is the beginning of consumption. Now, it is not always the breaking of a bloodvessel; and whether it is or is not so, consumption does not always follow. It is not denied, as we shall see hereafter, that hæmorrhage may take place from a ruptured or ulcerated vessel in the lungs, but this form of hæmoptysis is the exception to the general rule.

Hæmorrhage from the lungs most frequently occurs by means of exudation through membranes or the coats of vessels. Exudation of blood may also result from a constitutional derangement, of which I shall presently describe an instance in one of the cases before us. There are also exceptional cases, the cause of which I shall presently refer to; but by far the greater number are to be referred to the existence of tuberculous deposit. It is not difficult to understand how the presence of tubercular matter will cause blood to be exuded from the vessels. As all the blood of the body has to pass through the lungs for the purpose of purification before being again transmitted to the system, it is plain that the presence of any foreign body in the lungs must offer obstruction to the free transmission of the blood, and cause delay and congestion. The greater the quantity of blood present in the lungs, the greater must be the necessity of the presence of air to purify it; and the forced accumulation of both, occasions the blood to exude from the surface of the membranes and vessels. Hence we account, not only for the symptom before us, but also for the dyspnœa, or difficulty of breathing. It must also be borne in mind that the structures and vessels are altogether impaired in tubercular constitutions, and therefore admit more easily of transudation.

In the later stages of pulmonary consumption, the hæmorrhage results, not only from exudation, but from ulceration of smaller vessels in the immediate neighbourhood of softened tubercles. In the progress of the disease this hæmorrhage is small in quantity, though frequently repeated; but in advanced cases of a particular class it is profuse and generally fatal, having resulted from the ulceration of a large vessel. This lesion is still essentially different from what is termed the breaking of a bloodvessel, as, for instance, in the brain or its membranes, whether as in apoplexy, or as the result of an injury.

If we now briefly review the general character of spitting of blood, we shall find that it occurs under two forms — the one severe, the other slight. In the first, several ounces of blood will be brought up at once—six or seven or more ounces at a time. In the other, only specks or streaks may be seen in the expectoration: both forms being referable to exudation from obstruction; and although it is only the larger quantity which terrifies the patient, both forms equally reveal to the physician the existence of a diseased condition of the lungs.

When profuse, the blood is usually of a florid colour, frothy from the admixture of air, and clots of dark blood will be occasionally spit up, or sometimes vomited, when a sort of convulsive action of the diaphragm accompanies the expectoration of the blood. A difficulty of breathing almost universally attends it, as well as pain, which is usually referred to the sternum, though sometimes to the side affected.

You will now follow me through the case of J. F——, in Albert ward. He was received into the hospital having a severe attack of spitting of blood, which had come on suddenly, to such an extent, that in a few hours he had expectorated six or eight ounces. He was not in the slightest degree emaciated, the arms and chest being well covered with flesh; though he admitted that he had some slight difficulty of breathing, and a little cough, there had not been sufficient distress before the hæmorrhage began to warn him that there was anything wrong within the chest.

The patient is twenty-one years of age, and by trade a bootmaker; and in the course of his employment he had to use strong exertion, and whilst thus at work the spitting of blood came on. His pulse was 100 in a minute, but he had no fever; his bowels were confined. On examining the chest we perceived that he did not expand the right side as well as the left; on percussion, at about a couple of inches below the clavicle, over the upper lobe of the lung anteriorly, there was a decided dulness, very perceptible when compared with the sound on percussion on the left side; some degree of dulness was also found posteriorly by percussion. By the stethoscope the respiratory murmur over the left side was clear and good; over the right side, a crepitation or crackling over the upper lobe, together with here and there increased resonance of the voice. For treatment, he was immediately ordered a dose of calomel and colocynth, followed by sulphate of magnesia in infusion of senna; he was also ordered acetate of lead with morphia, and diluted acetic acid at intervals; for drink, lemonade; enjoined perfect rest; simple diet, to be taken cold.

The use of the dilute acetic acid is to keep the lead in the state of superacetate. The aperient treatment had for its object to divert the flow of blood to the bowels. When constipation exists, the active treatment of this symptom is of great value, and is often found of itself sufficient to stay hæmorrhage.

I have the following notes of his state on the third day:—

The pulse still 100 in a minute; the cough not troublesome, but still existing. Great relief had followed the action of the aperient. His expectoration clear and frothy, but free from blood. On examining the chest by the stethoscope, the air was found to enter freely and rapidly on the left side, but a hesitation or delay occurred to the passage of air into the cells on the right side, conveying an idea of some obstruction to its admission, as if resisted by some foreign body, the expiratory murmur being longer than the inspiratory. The pulse soon after this fell to 80, but in a day or two again rose to 100, when the expectoration again showed a few specks and streaks of blood. He complained of pain and weight over the upper part of the right lung where the breathing was a little tubular, indicating again some consolidation from tubercular deposit. A few leeches and a cupping-glass were applied; the aperient was repeated, and for the lead were substituted nitrate of potash and digitalis, with a view to act on the kidneys, and to control the heart's action; and the opiate was discontinued to avoid confining the bowels.

This appears to be a case of tubercular deposit in its earliest stage, the deposit being confined to the right lung, and being at present so limited in extent as not to have set up alarm in the constitution, the processes of nutrition not having as yet been interfered with. This man will be liable to returns of hæmoptysis, the severity of which would probably be heightened by any violent or unusual exertion. He will, sooner or later, be the subject of pulmonary consumption. His interval of tolerable health will be regulated by the favourable or unfavourable circumstances which may attend his life, and in a great measure on the care and treatment of symptoms as they arise.

A certain degree of relief for a time from his alarming symptoms may result from the equilibrium of the circulation through the lungs being, in a measure, restored. It is possible that the tubercular deposit has taken place rapidly, presenting a sudden obstacle to the transmission of blood through the lungs. A large withdrawal of the functional powers of a vital organ may be compatible with continued life, when the change takes place gradually, and the system has time and power to accommodate itself; but sudden interferences of a much slighter character will destroy life before the system has had time to accommodate itself to the change.

I shall now direct your attention to a case in which hæmoptysis occurred in a later stage of pulmonary consumption—that of S. B——, in Carlisle ward. This young woman, aged nineteen, has been received into the house more than once during the last year, with symptoms of phthisis so obviously marked that "he may run that readeth." On receiving partial relief she has been discharged. During her former admissions there were some appearances of spitting of blood, and this symptom has now become more grave and constant. The blood she spits is still only small in quantity at a time. It appears in specks and streaks, mixed with much purulent and offensive expectoration. The blood is florid. Her cough is most distressing, loud and frequent, and she suffers from the constant effort to vomit during the paroxysms. The case last considered was one of obstructed circulation through the lungs, and consequent exudation of blood through the membranes: in this case the blood is not only obstructed by tubercular deposit, but also escapes from the vessels in the immediate neighbourhood of the tubercles, the vessels being perforated by means of the ulceration which has taken place in the process of the softening of the tubercles and the breaking up of the lung. The chest in this young woman is nearly immovable, and to this circumstance may perhaps be attributed the slow progress of the disease. Adhesion of the lungs to the chest controls the movements of the lungs during respiration, keeps the organ quieter, and thus avoids irritation of diseased surfaces. The vomiting is a usual and marked symptom of pulmonary consumption. This may be referred partly to the expectoration dwelling about the fauces, but arises chiefly through the medium of the association, by nervous influence, of the throat, lungs, and stomach, which is effected by the pneumogastric nerve, and is a reflex act.

In the treatment of this form of hæmorrhage, palliatives are the only resource. Opiates to allay the irritation, and occasional local means to repress the attacks of pleuritic pain: a single leech to relieve the action set up at points where tubercular matter reaches the pulmonary pleura, exciting and giving rise to adhesions; or a liniment of chloroform and opium may also be used to subdue the pain till adhesion takes place. To restrain the hæmorrhage, and to prevent as much as possible the offensive character of the expectoration, alum is excellent. Creosote is also found useful; it seems especially indicated in these cases. It is not only a deodorizing agent, but stays sickness, and seems generally to palliate symptoms. If one searches for a reason for this palliation, I should give the following:—The lung having lost its power, from want of space, to throw off the carbon of the blood, the oxygen present during respiration remains free to damage the structure; creosote, therefore, being chiefly carbon, is offered to the oxygen, neutralizing the bad effects of the latter. Creosote is, in another form, the old tar water of the last century, which had a fashion without an explanation. Many remedies are taken up from good experience, but laid down because they are not explained. I only deprecate the present fashionable quackeries, as cod-liver-oil, &c., because they can be explained, and the reason has been found insufficient.

I shall now speak of a case of sudden hæmorrhage from the lungs to great extent, producing death. The patient, A. B——, was only about fortnight in the house. The general appearance of his chest showed no external signs of disease within it; no falling in or depression of the upper ribs, which is so frequently met with. There was great dulness on percussion on the left side compared with the right; no respiratory murmur could be detected on the left side, and the chest on this side did not advance on inspiration. He was not emaciated. He had severe cough, and other symptoms of pulmonary consumption; his pulse, however, was not accelerated.

Some time previous to his admission there had been a sudden severe hæmorrhage; during a violent fit of coughing the hæmorrhage returned, and he sank immediately.

On examining the body, the right lung had a few isolated tubercles scattered through it, still, however, pervious to air, and therefore a good breathing organ. The left lung was adherent to the costal pleura intimately throughout; the pulmonary pleura thickened by organized lymph to the extent of half an inch in thickness at the apex. The lung itself was contracted, shut up, so as to be almost wholly useless. The diaphragm encroached upon the cavity of the left chest, and was followed by the stomach. On cutting into the left lung, it appeared converted into a grumous looking mass, consisting of liquid blood, mixed with stringy, dark-red fibrine. A number of large tubercular cavities were exposed: in one of the largest was a branch of the pulmonary artery, of large size, surrounded and obstructed at the side of the cavity by deposited tubercular matter. Just above the obstruction, nearer to the heart, ulceration had taken place through the coats of the vessel. The diameter of the vessel at the ulcerated point was about three lines, and at about an inch and a half from this point, where the branch was given off, the artery was as large as the little finger.

We have here a case of true pulmonary consumption, rendered chronic by the supervention of adhesions, the consequence of inflammation external to the lung. By this means the lung has been kept quiet in its useless state, whilst the other lung was sufficient to carry on the function of respiration; thus accounting for the absence of the respiratory murmur in the lung, and also of the expansion of the left chest.

It may be well to note that a deceptive tympanitic sound was found low down in the left chest, caused by the space which should have been occupied by the lung having been occupied by the stomach. This sound and its cause are worthy of note, and are instructive. The tympanitic sound might have been stopped by making the patient take a large draught of fluid, which in this case would have immediately altered the character of the sound, and have afforded during life some evidence as to its cause.

These cases of sudden death from hæmorrhage are not uncommon. Many instances occur to me, but there was one especially which I watched unremittingly for five years, closing, like all the rest, similarly to the one I have just detailed to you. In that instance the right lung, and not the left, was the seat of the disease. The ribs on the right side, just below the clavicle, were quite depressed over a defined space of about a couple of square inches. Like all the rest, he had a slow pulse. There were complete intervals of comparative health during the five years, and even at times he gained weight, travelled abroad, and comparatively enjoyed life, though compelled to observe the caution of an invalid.

It is in these cases of chronic phthisis that the repeated rallies towards health give occasion to practitioners to build up the reputation of specifics; cod-liver oil, especially, owing its reputation to the temporary recoveries incident to this form of the disease. This nostrum, which has no other merit than being oily food, in a form easily to be absorbed and assimilated, has thus gained a false reputation of curative properties in phthisis. The real cure is not, in fact, forwarded by forced nutrition; and any advantages to be gained by it as a mere nutriment, could be much more naturally and pleasantly supplied by the lac c. sævo of the older Pharmacopœias (milk with suet), or by the still pleasanter diet of good, fresh cream. Besides the revolting properties of cod-liver oil, it contains the elements of the bile of the fish, if not the bile itself. It is by the presence of these elements alone that its purity can be tested by sulphuric acid. It is not wonderful, therefore, that so many stomachs recoil from it, or become disordered, since we know that the introduction of bile into the stomach is an unnatural process.

It is not to be wondered at that pretenders should catch at nostrums for the cure of diseases which are, in fact, incurable; nor is it surprising that those very diseases which are known by the well informed to be beyond the reach of medical art should be those to which cure-all-remedies are especially applied. There are many for phthisis; but most of all for cancer, the most inevitably and certainly destructive of diseases. That quacks by profession should do so, is sad enough; but to see our licensed brethren—some, alas! of character and attainments—indulging in the public longing for fashionable nostrums, is painful and humiliating. If any individual wishes to gain fat by disgusting food, there is no harm in allowing him to indulge in cod-liver oil. That which I regret is, that the fancy of its possessing extraordinary virtues should be indulged by accomplished practitioners who must know the fallacy of the idea.

We have yet to notice a state of functional disturbance by which hæmoptysis may occur without the obstructing presence of tubercles. As an instance, I give the case of H. R——, in Victoria ward, a girl of sixteen years of age, of short stature, and well developed in person. Her constitution had been fairly established; but the period had been passed over for three months. She came into the hospital under an attack of pleuro-pneumonia. There was crepitation over both lungs posteriorly, and the expectoration had the usual characters; it was red, rusty, and gelatinous. There was great pain in the chest, especially about the scrobiculus cordis. In about a fortnight the symptoms of pneumonia had disappeared. The cough had nearly gone; but she continued to expectorate a considerable quantity of thin, bloody mucus. This had entirely lost its plastic character, and was more like water tinged with blood; the pulse continued quick; the hæmorrhage was now of a passive character, and was only apparently kept up for want of the natural periodical relief; the tendency to the determination of blood to the lungs having been commenced by the attack of inflammation in them.

The chest bears the most minute examination without a trace of disease appearing in it. I therefore look upon this case as one of vicarious hæmorrhage, the lungs for the time doing the duty of the uterus. It will be necessary for you to distinguish between the obstruction in this case and the absence of this change during the later stages of true phthisis. In the latter case the want of power causes the absence of the catamenia for many months before a fatal issue. The cessation is then gradual, and may be regarded as a most discouraging symptom. In these cases, when hæmorrhage, though vicarious in its character, has been set up concurrently with inflammation in the lung, it is not prudent to use any specific remedy to divert the sanguinary relief into its proper course. The use of preparations of iron I would deprecate in the first instance. The patient, therefore, was ordered infusion of roses with gallic acid. The gallic rose contains gallic acid, and is therefore not an improper vehicle for gallic acid. Gallic acid is not very soluble in water, but sufficiently so for solution in the preparation of one part in a hundred; an ounce, therefore, being 480 grains, will very nearly carry five grains of the acid, which is the usual dose. After a few days, the hæmorrhage not being stayed, she was put upon acetate of lead, with small doses of acetate of morphia. This failing, she was put upon iron alum, combining the specific effect of iron with the astringency of alum. Iron alum has been found especially useful; it adds to the power of the alum a tonic property. This iron alum is an extraordinary preparation; it consists of the sulphate of the peroxide of iron, which replaces alumine, in combination with the sulphate of potassa. The compound thus formed is more astringent than before; its formula is $KO, SO_3, Fe_2O_3, 3SO_3, 24HO$. This is quite a different preparation from that alum in which the iron takes the place of the potassa, and in which the iron is in a state of protoxide. Iron alum is given in doses of ten grains three times a day. Aloetic aperients and the hip-bath assisted to induce the natural change, and the hæmoptysis ceased.

You must allow me to take this opportunity of recommending the utmost caution in the manner and phraseology in which you approach delicate subjects with female patients. The governing symptom in the case we have been considering is one upon which the feelings of all women are susceptible, especially those accustomed to the reserve of polished life. Genuine benevolent sympathy for the feelings of others, which is the only true groundwork of gentlemanly manners, must dispose everyone to speak with the utmost delicacy on every point where the infirmities of human nature are to be alluded to. This true delicacy is very far removed from affected modesty, which is even more embarrassing than bluntness to a patient. Simplicity and well-chosen expressions form a sure and safe rule for manners. As to that circumstance in early female life which has prompted these remarks, it is not properly an infirmity, yet it is always a trial to the pure young mind emerging from childhood; it is safest, therefore, to avoid all direct questions to such patients. There is always a mother, or an attendant, or some older friend, to be privately interrogated. I have seen men of sound merit forfeit the confidence of a family by speaking hastily and coarsely; and I have known instances in the country where valuable attendance on a large connexion has been lost through it. I would rather, however, not appeal to your interests, but to your generous feelings and to your laudable desire to sustain the gentlemanly character of your profession; and I should like, on this and on all kindred subjects, that the habits to be hereafter adopted in private practice should be begun within the wards of this hospital.

There seems to be no *à priori* guide to mark the probable occurrence of hæmorrhage which accompanies tubercular deposit. It occurs in about two-thirds of the cases of tubercular disease. It seems reasonable to suppose that the more sudden and extensive the deposit, the greater will be the chance of severe hæmorrhage occurring in the early stage, being then easily induced, before the system has accommodated itself to the presence of the obstructing deposit—that is, before the balance of the circulation has been fairly re-established. It is at such a juncture, during an unbalanced state of the circulation, that any sudden exertion, by forcing a larger amount of blood into the lungs, may suddenly overcome the sustaining power of the membranes, and cause immediate hæmorrhage to some extent. This, preceding any detected signs of tubercular deposit, is referred to by the sufferers, during the subsequent progress of phthisis, as the beginning and cause of the disease; it having been actually only the consequence of the unsuspected state of the lung.

This is the true solution of nearly all the so-called accidents of breaking bloodvessels during violent exercise, such as boat-races at the universities, or amongst mechanics during exertion required in the exercise of their trade. It must be admitted that cases do occur of real rupture of vessels in the lungs without any tubercular deposit; but these are very exceptional cases, too rare to become a rule, yet sufficient to afford a hope of a less formidable cause when hæmoptysis occurs. I can at this moment recall several cases to my recollection; they were all the result not so much of sudden as of long-sustained over-exertion. Two I remember occurring under great anxiety and excitement, when the respiration is so much accelerated, whilst more blood than usual is being continually forced through the lungs.*

To return to attacks of hæmoptysis from tubercular deposit. The slighter ones occur, as far as my experience goes, most frequently when the deposit, though large, has taken place very gradually; this state is accompanied with a quick pulse and a flat immovable chest. Slight attacks also occur later in the progress of phthisis from the ulceration of small vessels in the immediate neighbourhood of softened tubercles. The hæmoptysis here is not dangerous to life, but chiefly distressing from the tendency of the extravasated blood to decompose. There is also the sudden extensive hæmorrhage, sometimes subdued for a time, but always ending fatally. This follows the extensive ulceration of smaller deposits of tubercular matter, usually confined to one lung only, or where the deposit has taken place in the immediate neighbourhood of large vessels. Many of these cases are very chronic, having shown a small amount of constitutional disturbance, and are accompanied with a slow pulse. As a general rule in the commencement of tubercular disease, hæmorrhage takes place from the exudation of blood through the membranes of the lungs; in the latter attacks it takes place from the lesion of blood-vessels.

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* In the play of "Mercator," of Plautus, "Εμπορος" of the Greeks, Acanthio, the slave, is made to say, on being required to answer immediately,

Softly! I want breath;
I've burst a vein already for your sake,
And now I spit bood.

His young master, Charinus, answers—

Take Egyptian resin,
Mixed with a little honey; that will cure you.

Or in the Latin—

Ac. Placidè, volo adquiescere
Tuâ causâ rupi ramices, jamdudum sputo sanguinem.
Ch. Resinam ex melle Ægyptiano vorato, salvum feceris.
Mercatoris, Plaut., Act I., Sc. II., C. 26.

Clinical Lecture
ON
DISEASES OF THE BURSÆ.

Delivered at St. Mary's Hospital.

By WILLIAM COULSON, Esq.,

SURGEON TO THE HOSPITAL.

Gentlemen,—The close of the winter session having given us a little leisure, I shall avail myself of any opportunities that offer of addressing to you some clinical observations on the most interesting cases which may present themselves to us in this hospital. I use the word interesting in a practical sense, for it is not rare and curious cases alone which are most worthy of our notice.

You have lately seen two cases of inflamed bursæ in our wards. Although often met with in practice, this affection is usually not so severe as to entitle the patient to be admitted into an hospital. I shall, therefore, select the two cases alluded to, for the subject of my remarks on the present occasion.

Louisa L———, aged sixteen, a maid-of-all-work, was admitted, as you will remember, on the 10th of April last, for an affection of the knee-joint. On examination, the right knee was found to be considerably enlarged, especially at the anterior portion, where the swelling is such that it conceals the patella completely. The circumference of the knee is fifteen inches, while that of the sound one is fourteen inches only. The girl states that about a week ago, she experienced some pain in the knee while walking, and then observed that it was swollen; the pain and swelling have gradually increased from that time up to the date of her admission. The patient says that she has had a great deal of work to do, but not much kneeling. She can stand and walk about, but the motion excites a great deal of pain. Rest of the affected joint was secured by the application of a splint, and this was allowed to remain on till the 12th, when some fluctuation was perceived in the tumour. Mr. Lawrence, one of our house-surgeons, made a crucial incision over the patella, when about two ounces of purulent fluid escaped. Poultices were applied to the wound, which continued to discharge for a few days. At the end of a fortnight, the patient left the hospital quite well.

The other case was that of Susan S———, a housemaid, twenty-five years of age, who was admitted on the 20th January, 1858. The occupation of the patient compels her to run up and down stairs a good deal, and also to kneel much. A short time ago the knee became the seat of pain; swelling soon followed, the symptoms gradually increased, and at the date of her admission, she was unable to stand. On examination, the left knee was found to be swollen; the swelling was painful, and situated just over the patella, and the integuments here were of a red colour. No fluctuation could be detected. The patient was rather feverish, and her appetite was much impaired. On the following day the inflammation was found to have increased; there was much more pain, and the fever was higher. Eight leeches were applied to the swelling. These gave some relief, but on the 27th, symptoms of synovitis appeared. This complication continued for several days, and on Feb. 2nd my nephew, one of our house-surgeons, made an opening into the bursa in front of the knee, from which six to eight ounces of pus tinged with blood escaped. For a few days, up to Feb. 6th, the patient seemed to go on favourably; the discharge was abundant and the swelling diminished. On the 6th, a second incision was made on the left side of the knee into the joint, which gave exit to some ounces of healthy pus.

During the next two days the patient, though not complaining of much pain, felt weak, and on the 15th she was so low that she could hardly speak. Phlegmonous erysipelas now supervened, attacking the leg and foot.

On the 18th, an opening was made on the outer side of the foot, through which a large quantity of matter escaped. On the 21st there was a slight improvement; the discharge continued. On the 26th she appeared much better, and could answer questions with more ease. From this period up to March 15th, there was little change; but on the latter day she became more feeble, and was occasionally unconscious.

March 16th.—Passed a better night; pulse firm, 100.

25th.—She felt much stronger; the appetite had improved, and she slept well.

April 7th.—Is now much better; the appetite and rest are good; feels that she is getting strong.

12th.—Improving gradually and steadily.

The bursæ, as you know, are distinguished into two kinds—the deep-seated and the superficial. I shall now consider the latter, and chiefly the bursa situated over the patella, enlargement of which gives rise to the well known affection termed "housemaid's knee."

The bursæ, gentlemen, are shut sacs, bearing, in structure and formation, some analogy to the capsules of the joints; they are intended to facilitate motion or protect opposing surfaces; and they are composed of an external capsule, lined by an inner membrane, which secretes a fluid somewhat resembling synovia. The bursal lining membrane, however, does not exhibit the epithelial layer common to all true articular synovial membranes, while the fluid which it secretes, is an aqueous solution of albumen, combined with saline matters. In one specimen of fresh bursal fluid, examined for me by Mr. Toynbee, the gelatinous fluid contained a number of rounded and ovoid cells, enclosing granular matter, and having one or two transparent nuclei attached to their inner surface.

During disease this fluid may be increased in quantity, or undergo changes very similar to those which occur in synovia. I shall presently notice the alterations connected with inflammation; but now I may mention the curious fact, that these bursæ occasionally contain loose bodies and gouty concretions very similar to those found in joints, as well as other concretions. In one case examined by Rokitansky, the patellar bursa contained a quantity of thick, dark fluid, through which was disseminated a number of small, white crystalline earthy masses, hanging from the inner membrane of the sac. On examination, they were found to be composed of organic matter, containing 65 per cent. of phosphate of lime, and 18 per cent. of the carbonate of lime, with some traces of magnesia.

The affections of the bursæ are, as you might *à priori* conclude, very analogous to those of the synovial membrane. They are either acute or chronic, and in some cases are connected with an inflammatory affection of the lining membrane of the sac. The acute evidently depends on inflammatory action; and although the chronic kind cannot always be traced to the same cause, yet there are many reasons for attributing it likewise to inflammation.

The indolent form consists in simple enlargement of the bursa, without pain or the usual signs of inflammation of the structure. The tumour is, of course, developed in a locality where a superficial bursa naturally exists; it grows slowly, forming an oval, circumscribed swelling, without pain or redness of the skin over it. This tumour may take on inflammatory action at any time, or it may be evidently connected with inflammation from the commencement. In this case the tumour is painful; an effusion of fluid quickly distends the bursal sac, and if examined early, fluctuation will be discovered; the integuments soon become inflamed, and in all severe cases, there is more or less fever, with constitutional disturbance.

The indolent swelling, as you can readily imagine, produces little or no inconvenience beyond that arising from its size and mechanical interference with the functions of the neighbouring parts, especially the joints. The acute tumour, also, usually terminates well, but you should bear in mind that the inflammation of the lining membrane may go on to suppuration, giving rise to tedious abscesses, or even serious danger from inflammation of the neighbouring joints, as happened in one of the cases I have just detailed to you.

The morbid anatomy of the bursæ, gentlemen, has not yet been clearly and completely described by any pathologist. In chronic cases, the effused fluid may be serous or synovial; it is often discoloured, presenting a yellowish or reddish hue, or being of a dark, dirty colour. In these cases, the walls of the bursæ often become extremely thick, from chronic inflammation, or they may be condensed into a solid tumour, and the sac entirely obliterated. In acute cases the bursa contains a quantity of turbid serum, sometimes stained with blood, or holding in suspension flakes of fibrin; sometimes pus has been effused, but this termination is rare. When it does occur, the inflammation may extend to the joint, and give rise to suppuration of the synovial capsulæ, as occurred in a case mentioned by Andral, and in the case of S——, which you have seen here.

I must not omit to mention to you, that effusions of pus into the bursæ have sometimes been found in cases of purulent infection of the blood. This fact, which has received but little notice, strengthens the analogy between the bursal and synovial membranes.

There can seldom be much difficulty in ascertaining the nature of the disease when the superficial bursæ are affected. Inflammation of the patellar bursa may, however, bear a certain degree of resemblance to an attack of inflammation of the knee-joint. The patient complains of pain in the knee; the motions are painful; the joint is swollen and the skin is red. But in all these symptoms you will find, on closer examination, something peculiar to the bursal affection. Unless the inflammation be acute, the bursal affection is not attended with much pain, &c., and when it is, these symptoms appear much sooner than if the joint were affected, while they run their course more rapidly. The motions of the joint are attended with less pain from inflammation of the bursa than of the synovial membrane; the skin becomes involved at an earlier period; the seat of the swelling is different; in synovitis we find it at the sides, in housemaid's knee in front, and should an abscess occur, it presents, as Sir Benjamin Brodie observes, a peculiar character, "raising the skin from the patella, and extending from the centre of that bone, between the skin and fascia, until it covers the whole anterior part of the knee."

The treatment of enlarged bursæ, gentlemen, has given rise to much difference of opinion and practice. Reasoning from analogy, we might conclude that inflamed bursæ should be treated as inflamed synovial membranes, and indolent bursæ as encysted tumours. To a certain extent this may be true; but a great deal depends on the circumstances of each case. It is evident that active inflammation must be subdued by active means; but when this has been done, or when the tumour is naturally indolent, what treatment should we pursue? The principal methods recommended are—1. Rest and pressure. 2. Counter-irritation, mercurial or iodine frictions, &c. Abundant evidence exists to show that these and other similar means generally fail to effect a permanent cure. 3. Excision of the sac. In cases of small consolidated tumours, this practice may sometimes be adopted; but extirpation of the bursæ is a severe operation; it has been followed by considerable inflammation, great disturbance of the health, and in some cases by death. 4. The bursal tumour, again, may be treated as a chronic abscess. It may be laid freely open by incision, or the contents may be evacuated, and iodine injections thrown in to modify the action of the lining membrane. 5. The practice, however, which I adopt myself, and which I would recommend to you, is more simple than any of the preceding; yet I have found it effective. The enlarged bursa is punctured with a grooved needle, such as is used for exploring tumours and swellings of a doubtful character. After evacuation of the contents, pressure is applied by means of soap-plaster and bandage; this is renewed from time to time, and puncture of the sac also repeated if necessary. The result is generally a permanent and safe cure. Even in cases where the bursæ are inflamed, and the skin over them red, I should prefer the puncture now noticed to making any incision into the tumours or supposed abscesses. You will have observed that incisions were made by the house-surgeons in both the cases related to you, and that a considerable quantity of purulent matter was discharged through the wounds. This is not conformable to my practice. In one case it appeared to have answered well; but in that of Susan S——, the patient's life was very seriously endangered by extension of the inflammation to the joint and the neighbouring parts.

Clinical Lecture
ON
PELVIC ABSCESS.

Delivered at St. Bartholomew's Hospital, February 1st, 1858.

By FREDERICK C. SKEY, Esq., F.R.S.,

SURGEON TO THE HOSPITAL.

(*Reported by* Mr. T. M. Crowfoot.)

Gentlemen,—The disease which I am about to bring before your notice to-day is one in which I have been much interested for some years past, and inasmuch as it occasionally involves life, and is always more or less serious in its nature, is one also of great importance. It is pelvic abscess. There is no disease demanding a more correct diagnosis than some forms of chronic abscess. If matter is fully and abundantly formed, there is no difficulty in determining the nature of the disease; but if the abscess is not so far advanced, and there is only a thickened mass of lymph forming an obscure undefined tumour, the difficulty of diagnosis is often considerable. In whatever part of the body it may occur, this disease is remarkably characteristic of a low state of the system. This fact is clearly proved by the numbers of wretched, debilitated women, mothers of large families, and deprived of the luxuries and many of the necessities of life, who are ever hovering around our hospitals, ready to be admitted for chronic abscess. These are cases which demand much reflection, and which, when detected, require the adoption of a very positive principle of treatment. My attention was directed to a case of this kind in the hospital this very day. The patient was a young woman, with a pallid countenance, and an attenuated frame, who had married at nineteen, and was now at twenty-five the mother of five children. Her husband is a shoemaker, or probably mender, and he earns 10*s.* a week. She has a swelling in the calf of the right leg, which is without doubt a chronic abscess; no fluid can at present be detected in it, but the abscess is passing through that solid stage which precedes the formation of matter. If this woman's health is raised, if her strength is increased, and more *vis vitæ* given, matter will be formed; but if not, she will probably die, for she is seriously ill. I cannot call to mind one case of chronic abscess which could not be traced to some debilitating cause. Those who have the opportunity of witnessing largely cases of low fever, frequently see patients who, on their recovery from fever, are attacked with numerous chronic abscesses in various parts of the body. Here the fever is the premonitory sign; the predisposing cause, debility. Nature has endowed man with certain physical attributes, which enable him to contend against extremes, to respire the air whether of the tropics or of the poles. So also in respect of food; whether in the state of the highest plenitude or the lowest deprivation, he can exist in comparative health; but to this endurance there is a limit, and when he sinks below a certain level, disease invades his frame, and attacks him frequently under the form of chronic abscess. There are certain localities in which chronic abscesses are more prone to form than in others, and one of these is the loose cellular tissues about the peritoneum.

I gave a lecture last year on large collections of matter in the abdominal parietes, and closely allied to these are pelvic abscesses. The origin and progress of this disease may be detected by careful observation, and if it be not detected it will often terminate fatally. The knowledge of it is chiefly confined to physician and surgeon accoucheurs, as they are the persons who most frequently meet with it. Surgeons not engaged in obstetric practice are, in general, I think, not very familiar with it. If you reflect on the anatomy of the region in which this disease occurs, you will call to mind without difficulty the relations of the various organs that occupy the pelvic cavity—viz., the bladder, uterus and rectum. It is in the cellular tissue in all this region below the peritoneum, and surrounding the organs just mentioned, that pelvic abscess occurs. It is ushered in with rigors; the pain, as the disease advances, is intense; the impairment of the general health is great. The tumour may point either into the bladder, the rectum, or the vagina. If it point into the bladder, it must be allowed to burst of itself, for it admits of no relief from surgery; if into the rectum or vagina, it is amenable to operation. Some years ago, I was sent for to go down into a distant county, to see a lady who had been suffering from some severe symptoms connected with the pelvic cavity. Previous to this time I had read some remarks of Dr. Locock's on pelvic abscess, but I had not had much practical experience of the disease. My patient had had severe pain in the lower part of the pelvis, accompanied with rigors. This continued for many months, and at length a large abscess burst into the rectum. It continued to discharge for many weeks, and at length ceased. Pain then returned, deep seated in the lower part of the pelvis, and extending up into the anterior wall of the abdomen. In two months it burst again at the umbilicus, and continued to discharge for two months. It was at this period of the disease that I saw it. I diagnosed pelvic abscess, formed between the uterus and the rectum, and extending up above the former organ and the bladder, behind the recti muscles, along which it had left a track of palpable thickening. Finding the patient in an exhausted state, I advised the most nutritious food, and suggested bark and wine to be liberally administered, and recommended pressure to be applied to the abdomen by means of a belt and cotton wool and a flannel roller; for pressure I consider to be a most important agent of good in the treatment of this disease. These agents tended to the immediate reduction of the formation of matter, and she gradually but completely recovered.

I have lately had a similar case of great interest, which I will detail to you briefly. A lady who had advanced six months in the period of gestation had a small operation performed on her for some slight disease about the sphincter ani by a surgeon. Severe illness followed the operation. I then saw the lady. She was in a very reduced state as regarded her vital powers, and the first effort I made was to heal the wound in the perinæum, which was as large as a five-shilling piece, extending upwards towards the coccyx. I healed it by raising her strength, wine and bark, quinine, &c. Pains now came on in the pelvis, extending down the course of the left sciatic nerve. Considering these pains to be due to scybala, I suggested to her other medical attendants two drachms of oil of turpentine as an enema, and small doses of rhubarb and aloes, and in a week great quantities of scybala came away. So far this was satisfactory, but yet there was no remission of the pain, which now seemed to be localized behind the right sciatic nerve. The cause of this seemed doubtful, but a repetition of the former treatment was again followed by the evacuation of a large quantity of scybala, but there was no relief to the pain, which now became so intense, that 300 drops of Battley's solution taken in the twenty-four hours had but little effect in mitigating it. The physician who was attending the case now thought he detected a little projection between the vagina and the bone on the right side, and announced the presence of pelvic abscess. This opinion was confirmed by a most eminent authority in diseases of this nature, who said it appeared to him as if there existed a layer of fluid between the vagina and the bone, but deeply placed, and thought it beneath the pelvic fascia. Ten days after this, I saw the lady again, and now matter had evidently gravitated downwards, and was pressing palpably on the right side of the rectum. The general pain about the interior of the pelvis was very distressing to witness. I now determined, with the concurrence of the gentlemen on whom the responsibility of the case devolved, on puncturing the abscess through the rectum, and I selected this in preference to the vagina, through the coats of which the presence of matter was equally palpable, first, because the arteries are smaller in this situation; secondly, because the tumour was rather more prominent in this direction; and thirdly, because, as the lady was pregnant, it was of the highest importance to preserve the vagina intact. Having punctured the abscess by means of a long trocar, I drew off ten ounces of healthy matter. The next day the patient appeared relieved, and got sleep, but the day following the pains returned as severely as before the puncture. This I was the less surprised at, remembering the case of a man in the hospital who had iliac abscess, extending down into the thigh, which I punctured, and got away three pints of matter; and in this case the pus subsequently took a backward course through the great sacro-sciatic notch, and I suspected that the matter might be taking the same course in the present instance. On my second interview, therefore, with my patient, I thought I detected fluid at a point over the sciatic nerve where pain was felt. A fortnight passed without developing any evidence conclusive of the presence of matter, and then I felt certain that matter was collecting pretty largely at this spot. I therefore, with the concurrence of the lady's medical attendants, made an incision an inch and a half long through the integuments and fat, and then punctured with a grooved needle, and passing my finger into the wound, I tore through the deeper structures, in order to avoid wounding any branches of the gluteal artery. This was followed by the evacuation of fifteen ounces of most fœtid matter. The pain now greatly subsided. The necessity of maintaining her strength was obvious, and she was ordered one ounce of brandy every two or three hours during the first night, with half-ounce doses of tincture of bark to be administered occasionally. I deemed her to be now safe from relapse, though greatly reduced by her past sufferings, which have been unusually severe; but I was mistaken. A few days' intermission were followed by suffering more acute than ever, and it was obvious that matter in quantity was yet retained within the cavity of the pelvis. The wound in the ischiatic region, which had entirely healed, again burst open, and many ounces of more or less fœtid matter escaped every third or fourth day, but still without relief. It now became necessary to consider the expediency of making a more dependent opening, and with the concurrent opinion of Sir Benjamin Brodie, I made a free incision on the left side of the orifice of the anus, and cut down into the cavity of the abscess, from which some ounces of matter escaped.

Three attempts had now been made to afford relief to this suffering lady, but without success. The pain remitted in a degree for a day or two, and returned with equal violence in spite of our most vigorous efforts to mitigate it, and she sank exhausted within a fortnight of the last operation.

Original Papers.

ON A CASE OF THE SIMULTANEOUS INTRUSION OF SOLIDS INTO THE AIR-PASSAGES OF BOTH LUNGS.

By C. C. Claremont, Esq., M.R.C.S.

Although cases are both numerous and interesting of foreign bodies occupying the air-passages, yet I believe but three are recorded where the substances have been a tooth or fragments of a tooth.

Of these, the first is reported in the *Dublin Medical and Chemical Journal* for 1834, vol. v., by a Mr. Houston, and ensued upon extraction of a tooth from a man aged thirty: here the root and fangs of a lower molar passed into the right bronchus, and death was the result in eleven days.

The other two cases are related in the *Edinburgh Journal* for the same year. One, where an artificial tooth (a pivoted incisor) disappeared from its place during the process of mastication, and slipped into the lungs. It was ejected in eighteen months; but phthisis had been set up, and the patient (a lady) sank at the termination of the third year.

The other is a most remarkable case, that of a young girl, aged seventeen, into whose lungs an entire lower molar found a passage. On the eleventh day it was dislodged, and recovery followed. In neither of these cases was any operative procedure adopted.

Now, if such accidents occur under ordinary circumstances, is not the danger enhanced by the use of anæsthetic agents? The profession is, I am well aware, alive to the casualties incident to anæsthetic operations; but do we sufficiently guard against these exigencies in dental operations? Should lethal vapours be applied, for example, when the teeth are known to be brittle, what operative skill can protect the patient from the passage into the glottis of teeth or the fragments of teeth when he is physically insensible?

On the 7th of February, I accompanied Mrs. ——, a young married lady, to one of our most eminent and skilful dentists for the purpose of having three teeth extracted. The patient had been suffering for some time, and it was deemed desirable, in consultation, to administer chloroform.

The anæsthetic soon exercised its influence, and the operation was dexterously performed; but, unfortunately, on removing the third tooth, a molar on the lower jaw, it splintered beneath the grasp of the forceps, and it was necessary to have recourse to the "elevator." From commencing the inhalation of the vapour to the conclusion of the operation, only three or four minutes elapsed. The patient, on becoming conscious, had a violent fit of coughing and screaming. It soon subsided, and she expressed much satisfaction at having been so agreeably divested of her "old enemies." She suffered none of the after effects of chloroform, complained only of a little soreness about the chest, which I attributed at the time to the paroxysm of coughing, &c. I thought that the coughing was occasioned by a little blood having trickled into the glottis.

It may be here noticed, that previous to the visit of Mrs. —— to the dentist, she had suffered from no affection of the chest. It was consequently with no small surprise, on reaching her home, that I observed a remarkable peculiarity in her breathing, and on auscultation, it appeared that the lungs were in a state *resembling* effervescence.

During the day and in the night she had frequent fits of coughing, was restless, and experienced uneasiness about the chest. Her breathing during sleep was described by her attendant as like that of a child suffering from catarrh. On the following morning (Sunday) I found all the symptoms of bronchitis increased, the whole of the lungs engaged in the inflammation, the fits of coughing were more frequent and violent, but unattended with pain. The patient expressed her belief that she had swallowed a tooth; and this remark being confirmatory of a suspicion which I had begun to entertain, I lost no time in seeking the co-operation of Dr. Jenner, who, on being made acquainted with the facts, after a careful examination, expressed a doubt as to the existence of a foreign body in the lungs, both lungs seeming to be generally and equally affected; and, in the absence of stethoscopical evidence of such a fact, he was rather disposed to attribute the symptoms to the irritating and pungent effects of the anæsthetic vapour. The patient was free from fever, and during her whole illness was not prevented from going about the house and superintending her domestic matters. The treatment adopted was that for simple bronchitis.

The symptoms continued to increase, the coughing became more violent, and the nights more restless, up to the evening of Wednesday, when during a paroxysm of coughing several small fragments of dental enamel were coughed up. I say several fragments, though I am disposed to think it originally consisted of one thin lamina; it might have been crushed in the mouth. Great relief on the left side immediately followed the dislodgment of this portion or these portions of tooth, and on this side the characteristic râle was soon lost. Presuming the cause of the evil no longer to exist, I looked for a cessation of the symptoms generally. I was deceived; for on the right side, instead of an abatement, we had an augmentation of the symptoms; there was now considerable rhonchus over the whole of the right lung; the breathing became more noisy, and my attention was directed to a fixed spot (corresponding with about the termination of the right bronchus), where a remarkably loud cooing was heard at each inspiration; occasionally this was intermittent, and after one or two inspirations was heard again. She complained also of a fixed prickling pain passing from the margin of the sternum through to the scapula. Her breathing could be heard across a room of tolerable dimensions; it disturbed her husband at night, and was sufficiently loud to attract attention and elicit observations from her children. There was an inability to lie on the affected side, and she was frequently obliged to sit up in bed to relieve her breathing, and occasionally her sputa were tinged with blood. Her symptoms were augmented with accelerated circulation.

On Friday I again had the assistance and advice of Dr. Jenner. He thoroughly examined her chest, but nothing could be elicited to throw further light upon the case. On percussion, the lung was resonant throughout; rhonchus prevailed generally over the right side of the chest, and, with the exception of the cooing, there was nothing to indicate the presence of a foreign body.

On the next morning I was suddenly summoned, and found her coughing and retching violently; she pointed to the larynx, and requested me to examine her throat, as she felt something cutting like a fish-bone. I did so, and also examined the matter ejected. There was nothing to explain the attack; but I have not the least doubt that at this moment the sharp and rugged portion which was ultimately discharged was forced into the larynx, and not hitting the opening of the glottis, had fallen back to its old quarters.

Matters thus remained for a month without much abatement or increase of symptoms. Dr. Jenner saw the case frequently, and shared in my anxiety for the result. The patient occasionally complained of a disagreeable taste in the mouth, but no fœtor was apparent to others. The rhonchus on the right side, cooing, cough and noisy respiration continued, and its influence upon the system was becoming very manifest.

On the thirty-fourth day after the operation, she retired to rest, complaining of more than usual pain in the old spot and of weariness. In the night, she stated that while making a painful effort to shift the position of her child she seemed "to twist" herself, and happening to cough slightly at the same moment, a substance flew into her mouth. She placed it in her husband's hand, saying "Here's the tooth at last." I was sent for, and on examining her breathing, found the rhonchus and cooing had disappeared, only a little harshness remaining. In twenty-four hours the lung had recovered its healthy and normal tone.

On examining the fragment ejected, I found it covered with blood, and it was certainly a most formidable-looking body to be an occupant of the lung. It consisted of an irregular, rough, four-sided portion of the crown of a molar, with projecting, sharp corners. Weight, seven grains.

It should be stated that a little hæmoptysis immediately had followed its dislodgment.

Thornley-place, Oakley-square, 1858.

ON A CASE OF STRICTURE OF THE URETHRA, TREATED BY RECTO-VAGINAL PUNCTURE AND PERINEAL SECTION.

By Edward Menzies, Esq., M.R.C.S.

STAFF SURGEON, SECOND CLASS.

[Dr. Smith presents his compliments to the Editor of The Lancet, and at the request of Staff-Surgeon Menzies, who is stationed at Hong Kong, forwards for publication the accompanying case of Sergeant Williams, 59th Regt., should it be thought worthy of a place in that periodical.]

Army Medical Department, April, 1858.

Sergeant R. Williams, an Englishman, aged twenty-seven, of sanguineous temperament. He has served in the army upwards of eight years. He was invalided from Hong Kong for dysentery in July, 1854, and having recovered his health in England, re-embarked for Hong Kong in April, 1857, on board the steamer *Transit*. On the passage out in June, in bad weather, he was thrown *backwards* off the mainhatch by a roll of the ship, and fell against the ship's side, striking the perinæum on a projecting piece of iron or wood; he could not ascertain what it was, being dark at the time. Profuse hæmorrhage from the urethra followed, and continued for four days at intervals. Pain and difficulty were then experienced on micturition; the former ceased in a few days, the latter steadily increased. Shortly afterwards, he noticed a hard swelling, about the size of a hazel-nut, in the perinæum, at the seat of injury. On his arrival at Calcutta, in August, he was attacked with ophthalmia, and while in hospital eighteen days with that complaint, frequent unsuccessful attempts were made to introduce a catheter. The passage became daily more constricted, and the symptoms more urgent.

On the 4th of November, he embarked for China, suffering much during the voyage, and finally, the day before his arrival at his destination, he was attacked with complete retention of urine. He was brought to hospital on landing, and after various attempts to relieve the greatly distended bladder by the catheter, the recto-vesical operation was performed on the 18th of December, by Surgeon M'Wharrie, 59th Regt., under the influence of chloroform. The canula was left in until the end of the month without causing any irritation, when it was withdrawn, and the urine flowed through the urethra in a small stream, although the catheter could not be passed.

On the 17th of January, retention of urine again attacked him, and as the impermeability of the stricture had been so long declared, Syme's operation was decided on, and performed at eleven P.M., under chloroform. A staff was passed as far as the stricture, a free incision made in the mesian line, its point exposed, the strictured portion of the urethra, about half an inch, divided, and No. 6 catheter passed into the bladder; the hæmorrhage was trifling, and the operation perfectly satisfactory. The catheter was left in for forty-eight hours, when great irritation was experienced, and it was withdrawn. The progress of the case has since been highly satisfactory. Catheters of gradually increasing size have been passed, and there is now no obstruction in their transit, the opening in the perinæum has perfectly healed, and the function of micturition is restored in its integrity.

Remarks.—The performance of two operations —viz., recto-vesical puncture and perineal section, for the relief of so dangerous a condition as retention of urine, and the cure of so important a disease as stricture of the urethra in the same individual, in the short space of one month, is probably unique in surgical practice, and invites a few observations which I beg to offer, simply with a view of exciting discussion on their comparative merits in similar cases.

I witnessed the first (recto-vesical), in a case of retention of urine, at Guy's Hospital, last year, by Mr. J. Birkett, one of the present surgeons, an old friend and fellow-apprentice. I was certainly fascinated by its rapid and satisfactory result, and left the hospital with a strong bias in its favour, as a simple and expeditious mode of relieving a state of intense agony and danger, and one filling the patient with emotions of gratitude, and covering the surgeon with *éclat* and credit.

The case of Sergeant Williams, however, induces reflection on the propriety of its indiscriminate application, and starts the question, whether, although the immediate object—viz., the relief of the bladder—is accomplished with such facility, is the ultimate and equally important end—viz., the cure of the stricture—so much advanced by this procedure as to give it a decided superiority over any other? In this case the stricture was in no degree affected by the urine ceasing to enter the urethra. The point of the smallest or the largest catheter appeared to impinge in the bulbous portion against a solid wall or obstruction, which could neither be penetrated by justifiable force nor entered by careful insinuation, although up to the period of each attack of retention the patient could micturate in a fine stream or guttatim. It is, of course, impossible decidedly to affirm what was the exact condition of the canal, through which no one could pass an instrument, and which yet permitted the partial performance of the function of micturition; my own conviction is that a false passage existed, forming a semicircle round the effused lymph, the result of the injury, and that the point of the catheter was always brought up sharp at the anterior entrance of this detour. I base this conclusion on my having arrived, in the early steps of the operation, at a tube or canal, about the size of a crow-quill, which I at first took to be the urethra, but could not trace, and under which, at some depth, I found the canal itself. The closure of this temporary channel for the urine, by congestion of the surrounding parts, in the constant efforts to empty the bladder, causing retention of urine, may be easily understood.

This case appears to prove clearly that dilatation of a stricture, after the recto-vesical puncture, may occasionally fail; but whether the plan of treating retention by puncturing the bladder through the rectum, and subsequently dilating the stricture, if such can be accomplished, is always to be considered as merely temporizing with a disease which can only be permanently cured by the operation so ably advocated in the Edinburgh school, I leave to the decision of my professional brethren; but on the principle of attaining the double object by one operation with greater certainty, I enlist myself under the banner of Professor Syme.

General Hospital, Victoria, Hong Kong, Feb., 1858.

ON A REMARKABLE CASE OF ENCEPHALOID DISEASE OF THE RIGHT OVARY, WEIGHING TEN OUNCES AND A HALF, OCCURRING IN AN INFANT NINE MONTHS OLD.

By Richard Brown, M.D., Hove.

Naomi J——, aged nine months, residing in George street, Cliftonville, was brought to me for advice on the morning of the 15th of February. The mother stated that on the day before she first observed her baby's stomach was very much swollen; that up to this time it appeared in good health, except that it got rather thinner, which she attributed to teething, as her children usually fell away at that time. The child was fretful, and occasionally cried out as if she were in pain in her abdomen, and sometimes vomitted her food; the abdomen was very much distended, and tympanitic generally, except the hypogastric region, which elicited a dull sound on percussion; but the mother assured me the child had passed its urine freely; she was anæmic-looking; pulse frequent and feeble; tongue white; evacuations of a greenish hue.

Feb. 16th.—No improvement in the symptoms; the child very restless, and frequently screaming out as though in acute pain.

17th.—The abdomen remains distended to the utmost, and tympanitic; the vital powers evidently sinking. In the evening of the same day I found the child in a semi-comatose state; pulse very rapid and feeble, and extremely cold. At midnight she expired.

The following day I made a post-mortem examination of the body with my friend Dr. Davis. Upon opening the cavity of the abdomen, a quantity of fluid (serum) escaped; the small intestines were very much distended with flatus, and pushed up by a large tumour occupying the pelvic cavity, the hypogastric, and part of the umbilical region; the stomach was empty; the cæcum contained a small quantity of greenish feculent matter; the whole of the viscera were healthy in appearance, but exceedingly pale; no signs of peritoneal inflammation. The tumour I found seated in the right ovary, which I carefully removed with the uterus and its appendages, and afterwards gave it to Dr. Ormerod to add to the museum of the Sussex County Hospital. It was of an oval form, and a mottled white-and-red colour, the different coloured patches being separated by sulci, in which ran large vessels, giving the tumour very much the appearance of a small brain. Besides these patches were small cysts, here and there containing a clear yellow fluid. On dissection, more of these cysts were visible, and the difference between the white and red parts appeared very distinct, referable apparently to the different degree of vascularity of the different parts. The substance of the tumour consisted of a matter of about the consistence of cerebral substance in a child of that age. Under the microscope it displayed numerous cells, more or less affecting an oval form, some much more elongated, all nucleated. The uterus, particularly the cervix, was very much enlarged.

Malignant disease of the ovary, though of rare occurrence, and seldom a primary affection, has, I believe, never been met with, except in adults, or before the commencement of sexual activity. Encephaloid tumours are less common than other malignant diseases of the ovarium; but the disease occurring as a primary affection in an infant at the breast, is unparalleled, and renders this case unique. The rapidity with which it ran its course, the age of the child, and the absence of any symptom that could excite the suspicion that the disease was malignant in character, are circumstances of great interest.

Adelaide Lodge, May, 1858.

INFLAMMATION OF THE SKIN ON THE DORSUM OF HANDS AND FINGERS, FOLLOWED BY INFLAMMATION OF THE SUBCUTANEOUS CELLULAR TISSUE, CAUSED BY DIPPING THE HANDS IN A STRONG SOLUTION OF SULPHATE OF COPPER.

By W. H. Moor, Esq., M.R.C.S., Herts.

J. H——, aged fifty-five, a strong, healthy-looking agricultural labourer, who had always enjoyed good health until within about twelve months ago, when I attended him for necrosis of the left superior maxilla, and removed the greater portion of the alveolar process, since which he states that he has always been ailing, though able to continue work. For some days previous to my first seeing him he had been frequently dipping his hands in a strong solution of Cn. O, S O_3, in which wheat is very generally steeped before sown.

Nov. 12 (the day he was first seen).—The skin on the dorsum of the hands and fingers much inflamed, red, rough, as though raised in parts from the subjacent tissue, and hot, but presenting no breach of continuation; he complains of his hands feeling hot, tingling, and smarting; general health good.

On the 14th there were large bullæ on the dorsum of both hands and fingers, which I opened, liberating a dirty, greenish-looking liquid, which I am sorry I could not collect for analysis. This relieved him, but on the following day violent pain recurred.

On the 16th there was much œdema on the dorsum of both hands and fingers. I made free longitudinal incisions, liberating a quantity of liquor sanguinis. The wounds bled freely; the blood contained a large amount of fibrin.

On the 18th I again made an incision on the dorsum of each hand, liberating a little pus from the right, after which they progressed favourably.

The patient was able to resume work on the 14th of December. The skin on the dorsum of the hands and fingers peeled off.

Furneux Pelham, 1858.

INDUCTION OF PREMATURE LABOUR IN A CASE OF DEFORMED PELVIS.

By Henry St. John Bullen, Esq., M.R.C.S.,

MEDICAL OFFICER TO THE LAMBETH WORKHOUSE.

Maria D—— was admitted into the lying-in ward of this workhouse on the 9th of last September, having, according to her own calculation, just completed the seventh month of pregnancy. Being afflicted with considerable contraction of the upper pelvic brim in the antero-posterior diameter, she had in four successive labours, occurring at the full period of gestation, been obliged to consent to the destruction of the fœtus, in order that her deliverance should be effected.

Under these circumstances, it was judged advisable in any future contingency to induce labour at the termination of the seventh month of pregnancy, with the view, of course, of attempting the preservation of her infant.

Having satisfied myself that she was carrying a living child, I had recourse to the usual operation for inducing premature labour, and which was carried into effect two days subsequent to her admission. After the further lapse of forty-eight hours, labour came on, attended with vigorous pains, and very shortly the child, which presented with the vertex, was expelled entirely by the natural efforts. The infant, a male, was, notwithstanding its diminutive size, and its premature "forcing into this breathing world," healthy and well formed. I am happy to add that both it and the mother did well, and were discharged in due time from the ward in a most satisfactory condition.

Lambeth Workhouse, 1858.

SKETCHES OF SOME OF THE TROPICAL DISEASES.

By Francis Day, Esq., M.R.C.S. & F.L.S.,

ASSISTANT-SURGEON MADRAS ARMY, AND 3D INFANTRY HYDERABAD CONTINGENT.

(Continued from June No., p. 489.)

Treatment.—In this, two great principles may be said to be clearly predominant above all others. The first is, that we should arrest as quickly as practicable the paroxysms of the disease, for a continuance of them brings about a cachectic condition of the patient, leading to numerous secondary lesions, favouring the continuance and promoting the return of the disease. The second is, that although complications such as have been described exist, the especial object of our general treatment must be, first, to attack the fever, for by it the intensity of the local complication, whatever it may be, is augmented, more especially during the paroxysm; but with a decrease of the ague comes a decrease in its severity, or even its total subsidence; therefore the employment of remedies for the local lesion may take place along with, although holding a subordinate place to the antiperiodic.

The treatment of agues, although all the types run one into another, still naturally divides itself into that which is required for the simple dynamic and adynamic types, and this, again, may be subdivided into that necessary during the paroxysm, the intermission, and the termination or stage of convalescence.

In the simple types, few words are necessary before commencing this subject. Sometimes merely rest, with clearing out the bowels, conjoined to slight abstinence, are quite sufficient for effecting a cure; or, if antiperiodics should be requisite, their exhibition is rapidly successful, whether the patients are Europeans or natives of India.

The alvine, biliary, and all excretions, must always be carefully attended to in all cases of fever, or congestions will be favoured. At hill stations, a stiff dose of brandy-and-water will often cure a native in whom cold alone has been the exciting cause. During the paroxysm our principles of treatment are, to protect the important viscera, which object will be effected by guarding against congestions in the cold; too great vascular reaction in the hot; and relieving the whole system by the promotion of perspiration in the sweating stage; but at the same time we must be cautious and not proceed too far in the last, and so induce fatal exhaustion.

In the cold stage, if the tongue is foul, emetics may be exhibited, by which it, and also the paroxysm, appear at times to be shortened; the feet may be put into warm water, to which mustard may be added, or hot bottles or bricks be applied to them; the body should also be well covered up and kept as warm as practicable.

Opiates as a remedy are of great use in agues: given in conjunction with an antiperiodic, before the accession of a paroxysm, they sometimes augment their efficacy, probably by soothing nervous irritability; if there is want of rest during a paroxysm, and the pulse remains good or not much depressed, they are useful, but should not be administered at any time when there is a tendency to death by coma, or to one by asthenia, near the termination of a paroxysm. When symptoms appear to tend towards delirium tremens, in old drinkers, opiates are advisable.

Digitalis has been also recommended as a remedy for restlessness, when the action of the heart is excessive. The same rules as those necessary for the exhibition of opium must be observed in its employment.

In the hot stage, the patient should only be lightly covered; diaphoretics and cooling drinks are useful, to bring on perspiration, which may even be promoted by an emetic, if not previously administered. The remedies most appropriate are James's powder, tartar emetic, neutral salts, nitrates of potash and soda, according to the symptoms present, and the patient on whom the medicine is to be employed. Mixtures of sulphate of magnesia and tartar emetic, though decidedly serviceable in some cases, not unfrequently produce irritation of the bowels, and, as a rule, should be avoided. Should headache be severe, cloths damped in cold water or vinegar-and-water may be applied to the head, with cupping or leeches to the temples.

In the sweating stage, diaphoresis, unless too profuse, should not be checked. Purgatives may be administered if the bowels have not been freely moved without them, or they have not been given before, for vitiated secretions in the bowels cause irritation there, and tend, by such irritation, to keep up the tendency to fever. Care must be taken that there is not retention of urine; if necessary, it must be drawn off with a catheter.

In the intermission, the diet must be regulated and exposure avoided, whilst antiperiodic remedies must be administered, by far the most important of which is quinine; but to avoid needless repetition, it will be easier to examine it, and some other antiperiodics, together, at the end of these remarks on the treatment of agues.

The powers of imagination exercise considerable influence over this disease; thus, placing a tourniquet on one of the patient's limbs, about an hour before a paroxysm, and directing him to screw it tight if he feels it coming on, will at times, in an European—at least if his belief in the remedy is implicit—prevent or postpone an attack. The Turks are said to blister one of the fingers, with, perhaps, the same view; mustard poultices applied over the region of the spleen, will often have this effect, and a Madras medical officer, in illustration of the powers of the imagination, gives an account of what occurred many years ago in Ireland. A militia man's wife had daily attacks of ague, which were unrelieved by medicine. One day a little before the usual hour he came home with his musket, and told her it was for the purpose of shooting her if it came on. Presently the rigors commenced; he rammed down a blank cartridge; she rushed to, and jumped out of the window; he fired the powder over her head. The fright effectually cured the paroxysm, and prevented its return.

In the termination, or stage of convalescence, little else is requisite than to prevent the patient eating or drinking too much, exposing himself to cold or damp, or too soon returning to his customary avocations. Medicine is not generally required, or if it is, an infusion of chiretta, or some bitter tonic, will most likely be sufficient; strong purgatives, if now employed, will not unfrequently cause a return of the paroxysm.

In the *dynamic type* we have to deal, as before stated, with cases of more severity. In them complications frequently occur; but inflammations occurring during the course of fevers never have that rapidity they possess when taking place by themselves. The cold stage may be protracted, causing intense visceral congestions, even proving fatal. The intense reaction of the hot may cause important lesions, whilst prostration may be severe in the last, or sweating stage. All these reasons for anxiety must influence our treatment, which ought to be prompt, but cautious, or else our vigorous measures may leave the patient in a very debilitated state, favouring that cachectic condition of his constitution, which ultimately tends to retard recovery from the disease.

During the paroxysms, the objects for which our treatment is employed will be the same as was stated in the simple type; but as just indicated, with the increased intensity of the disease, we must institute increased vigilance in our measures.

The variety of relapse due to atmospheric vicissitudes in the cold season, and described under the head of sub intrans variety of dynamic fevers, with bronchitis and catarrh, and seen in the natives, merely require purges, antimonials, nitrate of potash, rest, and rarely antiperiodics. In parts of the country where this type exists, the general course of treatment may be thus summed up throughout the year: Abstraction of blood, purging, and reducing vascular excitement in the hot months; quinine in the wet and drying up season; purging and antimony, with neither abstraction of blood nor quinine in cold weather.

In the cold stage emetics may be exhibited should the tongue be loaded, and a nasty taste exist in the mouth, if there are not symptoms of irritation of the stomach, along the course of the intestinal canal, in the liver, stomach, spleen, or determination of blood to the brain; otherwise the same plan of treatment, as advised in the simple type, may here also be employed.

If the patient is a young and robust European, bloodletting may be deemed advisable; in its employment, bleeding to faintness is never desirable, for such a result might lead to alarming symptoms. The rule for the amount to be taken must depend upon the effect produced upon the patient; thus, if there is a congested state of the vascular system, depressing the functions, a decreased amount of circulating blood may be more safe for the patient than an undiminished quantity unfit for the purposes of life; or, in short, where the force requires to be immediately arrested, or the amount to be lessened, it is requisite, but is more likely, as a rule, to do harm than good if employed after the third day. In its use caution must be observed; it may cut short the cold fit, relieve the symptoms, assist in promoting the absorption of remedies, and its abstraction, permitting a free exercise of the functions, relaxes the surfaces where secretion and excretion is carried forward. It lessens the load of blood in the circulation, and so diminishes the amount of vascular reaction in the succeeding stage. A repetition of it may be necessary if the first have been employed too soon, been too small in quantity, or after it the reaction has been excessive. If it was primarily made use of to relieve a local complication, and having at first had that effect, the symptoms have returned, but to a less violent extent; if the pulse is full, it may again be advisable, but if the pulse becomes more open, and the patient weaker, bleeding is inappropriate, because it depresses more in fevers than it does in inflammations, and should never be made use of at any period in the disease when there is prostration, cold extremities, tremulous hands, sordes about the gums, incontinence of fæces or urine, for fatal syncope may be induced, or the hot stage may be prolonged into a low remittent form, the powers of the patient being unable to bring about the third stage; or the loss of blood, if great, may tend towards producing that cachexia which, it has been pointed out, is so greatly to be avoided. But if there are symptoms of cerebral congestion, we must blister the head, leech or bleed to the amount required by the case, always remembering, that as the influence which causes it is only temporary, we must stop the paroxysm as rapidly as possible. In natives of India, bleeding is generally deprecated in this stage.

In the hot stage, emetics are rarely advisable. The headache, if it does not relieve itself by epistaxis, must be mitigated by cold affusions, applications, and leeches; the intensely and pungently hot skin by diaphoretics and diluents, such as were described in the last type; but if these are unsuccessful, the patient should be sponged all over with tepid or cold water, (unless there appears to be determination to some internal organ) by which sometimes immediate comfort is afforded; this subject will be deferred till arriving at remittent fevers.

If there is irritation of the stomach, fomentations, with a full dose of calomel and opium, may be given, to which, if vomiting is present, it may be advisable to add creosote.

Warburg's fever drops, apparently a most efficacious remedy, promoting diaphoresis, and at times removing all symptoms of ague even when quinine in large and small doses is ineffectual for that purpose, may now be tried. But if all these remedies do not lessen the discomfort, the pulse remaining full, headache severe, and the patient is young and robust, bleeding from the arm may be necessary, which should never be carried to faintness nor employed towards the end of this stage, the same precautions being observed as were suggested in the cold stage. If the reader of this calls to mind that the depressing effects of the first stage have now passed by, he must not also forget that the exhaustion of the sweating has yet to be gone through.

If determination exists to a great extent towards any important viscera, bleeding may be requisite, whether the patient is an European or a native—that is to say, if the intensity is such that its omission would appear to be hurtful; but it must be recollected that mere congestions will generally pass away with the subsidence of the paroxysm, a return of which may generally be prevented, or its virulence decreased, by appropriate treatment during the intermission. If, therefore, leeches, cupping, or fomentations relieve the present symptoms, much may be gained, for loss of blood, as before observed, generally prolongs the course of the disease and favours its return.

In the cold stage, we must watch that exhaustion is not fatally severe. If the pulse sinks at the end of the hot stage, before the sweating one begins, and the patient becomes very weak and low (depression from a too-congested state of the vascular system, which requires moderate depletion, as seen in the early stage of a paroxysm, must not be mistaken for this form), animal broths, and even stimulants, as ammonia and camphor, are requisite. A hot turpentine epithem may be applied over the chest and abdomen, and on no account should the patient be permitted to leave the horizontal posture: bleeding or even leeching, now, may induce fatal exhaustion. In the intermission our endeavours will be, to prevent a return of the paroxysm; the bowels should be kept free; a calomel purge is here most useful.

If splenic enlargement be present, it is usually due to a cachectic state of the blood, which state is favoured by a recurrence of the feverish paroxysms, and our endeavours during the intermission must be, to stop their return by the exhibition of antiperiodic remedies. The same treatment is necessary in hepatic enlargement, but with these modifications—that if acute or chronic inflammations are present in this organ they must be treated as usual; pneumonia, diarrhœa, or dysentery, must likewise be prescribed for in the general way, always endeavouring to stop the paroxysms, and avoid a cachectic state. Though the powers of digestion may be too feeble for its being expedient to give much animal food, still broths may be necessary.

In the termination, or stage of convalescence from malarious fevers, there are often various sequelæ to it: if the spleen is enlarged, a quick removal to a more healthy locality is advisable, and the absorption of the effusion should be promoted, by improving the general health, for as the blood's quality improves, the activity of the absorbent system becomes augmented, and the enlargement may be partially or wholly removed. For medicine tonics are most appropriate, as small doses of quinine and iron, with laxatives; the internal and external use of iodine and bromine, are also advised by me as well as the external employment of nitro-muriatic lotions; leeches and mustard poultices are now and then necessary, to relieve pain; blisters may likewise be useful, only caution is necessary in their employment, because of the state of the patient's constitution, which totally precludes the use of mercury.

If the liver have been enlarged simply from the same cause as the spleen, the same cautious, and partly the identical treatment may be profitably followed out. Purgatives are not more admissible if there does not exist a tendency to diarrhœa or dysentery; also small doses of mercury may be advantageously employed, not to cause salivation, but to increase the liver's action.

Further observations can hardly be necessary in the treatment of complications, which must be according to the patient's constitution and the symptoms of the case.

(*To be continued.*)

ON THE RIGHT USE OF SEDATIVES IN DISEASES OF THE WOMB, AND IN MORBID MENSTRUATION.

By Edward J. Tilt, M.D.,

SENIOR PHYSICIAN TO THE FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY.

Pain is almost synonymous with disease, and is proverbially frequent, whether as the symptom of well-understood morbid conditions, or as the sole indication of disease. Pain can generally be cured by the systematic treatment of the attendant diseases, though it often specially indicates the exhibition of sedatives; and then the question arises whether they should be exhibited so as to act first on the system, or whether they should be directed to the seat of pain. Doubtless a strong opiate, fully affecting the nervous system, has been known to remove the pain localized in some well-circumscribed spot, but in many cases it only procures a small abatement of the suffering, and the same dose cannot be repeated sufficiently often to cure neuralgia without locking up the internal secretions, and entailing a state of semi-narcotism very distressing to the patient. For these reasons, when sedatives are used in neuralgic affections, they should be applied as near as possible to the seat of pain. We foment the painful spot with sedative fluid; we rub in sedative ointments and embrocations; we leave them on the skin, so as to envelop the extremities of the sentient nerves in a sedative atmosphere; we apply opiates to the denuded skin—they have even been injected with benefit into the tissues surrounding the agonized nerve. Although this principle is generally accepted as correct, it is not sufficiently followed in the treatment of diseases of women. I therefore propose showing what good results may be obtained by putting our practice in harmony with well-grounded theory.

He must indeed be young in practice who is not aware how frequently pain and neuralgia, under various forms, appear as an important symptom of morbid menstruation, of diseases at the change of life, and of uterine and ovarian affections. Neuralgia in connexion with the reproductive system is still more frequent in women of the upper classes, in whom a nervous temperament has been inherited, and rendered more intense by injudicious schooling and by habits at variance with correct notions of hygiene. Suppose a patient suffering habitually from nervous uterine irritability, from bearing down pains, vesical tenesmus and severe pains in the sacrum and thighs, the necessity for sedatives will strike every one. Most medical men will give them by the mouth, either in such moderate doses that the patient's suffering will be long in abating, or, should the quantity have been sufficient to assuage the pain, the drugs may have acted so strongly on the system that it would take some days to recover from their poisonous effects. Afraid of this, others would apply sedatives to the pelvic regions or the loins; but before relief could be given much time must elapse, though, if the fomentations had been associated with sedative injections into the rectum, relief would soon be afforded, without any subsequent ill effects, because, the remedy being applied directly to the diseased nerve, the dose could be proportioned to the intensity of the pain. Is it not, then, better to give sedatives by the rectum than to leave a patient in an habitual state of suffering, or with the occasional variation of an overdose of opium? This is applying the remedy to the right place, or *applying the sedative as near as possible to the suffering nerves.* In severe cases of uterine or ovarian neuralgia one ought not to prescribe in the dark. An accurate examination must be made, and none is accurate unless the eye can confirm the testimony of the finger. Often the neuralgic affection has been caused, or at least kept alive, by some slight ulceration of the neck of the womb, which can be seen but not felt; and when this is cured by surgical treatment, the neuralgia vanishes. At other times patients suffer greatly from abdominal neuralgia and slight uterine disease, which I have promised speedily to cure by cooling injections and slight applications of a strong solution of nitrate of silver at stated intervals. By these means I have soon cured the ulceration, but the patient, continuing to suffer as before, rings the changes on medical men, until cured by some more fortunate practitioner, or by time—the great physician. Such cases are not rare.

Although advocating in no weak terms the use of sedatives, I in nowise repudiate what is advanced in my various works on the utility of surgical treatment in uterine affections; but only assert that uterine pathology is not all included in ulceration of the neck of the womb, and that caustic is not the sum and substance of uterine therapeutics. In the milder forms of ovario-uterine neuralgia, as it attends morbid menstruation, diseases of the change of life, inflammatory and other diseases of the womb, I maintain that the neuralgic element should be attended to, although constitutional remedies and surgical treatment may be likewise required. The use of sedatives in such cases paves the way to more rapid cure, and I advisedly use the plural number, as it is better to exhibit a combination of several sedatives than one alone—a general principle of therapeutics well explained in the late Dr. Paris's "Pharmacologia," and which applies forcibly to diseases of women. In the cases above specified, I order a camphorated liniment, to four ounces of which I add half an ounce of laudanum and two drachms of tincture of aconite. I recommend this to be rubbed carefully, for five minutes, on the lower part of the abdomen, or on the sacral region, or on both if they be the seat of pain. The application may be rubbed off; but the treatment will be more successful if left on, and a wadding poultice applied, and kept in place by a piece of oil-silk sufficiently large to wrap round the loins and fold over in front, thus enveloping the lower part of the abdomen in a sedative vapour-bath. Should this be ineffectual, I prescribe sedatives by the rectum, beginning with the following prescription:—Battley's solution, one drachm; tincture of hyoscyamus, one ounce; spring water, three ounces. Half an ounce of this lotion contains one scruple of Battley's solution and one drachm of tincture of hyoscyamus, and I order this or double the quantity to be put into a two-ounce india-rubber bottle. This the patient fills up with warm milk, and after screwing on the canula, and anointing it with a little cold cream, it should be gently pushed up the bowel. When this is done, the firm pressure of the bottle by the hand will empty its contents into the bowel; the bottle should then be withdrawn; the mild nature of the fluid and its small bulk almost always allow of its being retained. This should be used twice a day; and if effectual, I add to the four-ounce solution one drachm of tincture of belladonna, or one or two scruples of tincture of aconite, or both quantities, which can be varied to meet the exigencies of different cases. These sedative solutions may be used likewise as vaginal injections, care being taken to so raise the pubes as to enable the fluid to be retained; but as this must be entrusted to the patient or nurse, it is impossible to know what quantity of the solution is placed in contact with the womb, and how long the contact is maintained. Therefore I deem it better to prescribe the sedatives by the rectum when their administration is to be entrusted to the patients themselves. When it is remembered that the reproductive organs are intimately connected with the lower part of the bowels by nerves, bloodvessels, and cellular tissue, one can understand that an excellent way of acting on the womb is by the rectum, the more so as its mucous membrane has a greater power of absorption than that of the vagina. I have dwelt on this at greater length in my work "On Diseases of the Change of Life," and shown that this mode of treatment is useful not only in the specified cases, but in cancerous affections of the womb, when it is necessary to abate the severity of pain without injudicious interference with the fragile tissues of the womb. This mode of treatment has even a wider range than the removal of pain, for many obscure nervous affections may be thus amended, and mental affections may be thus cured when they depend on a perverted action of the reproductive system.

One of the cases stated in the work just mentioned was a patient of my friend, Dr. J. Brown, of Chatham, who had for many months been troubled with strange delusions, and secluded herself from society. I took so serious a view of her case, that I told her husband my fear that it would soon be advisable to place her under restraint; but as there had been a great amount of uterine neuralgia ever since the cessation of menstruation, there was a chance that, by quelling this irritation, the nervous system might be calmed, and the mind strengthened. I therefore ordered strong sedative injections by the rectum, which were continued for some months, and were without doubt the principal means of restoring her to her previous state of good health.

Such measures are generally found successful; but sometimes the patient will not or cannot retain the medicated fluid, and narcotic suppositories are objected to, or else the neuralgia may be too severe to yield to the treatment.

Two years ago I was asked to see a lady residing a few miles from town. She was married, about thirty, of diminutive stature, nervous temperament, dark complexion, and reduced to extreme emaciation, having literally been confined to her bed for several months by an excruciating pain in the back and in the lower part of the abdomen. The pain was constant, but with paroxysms more violent at the menstrual periods. The flow was scanty, and there was a semi-purulent vaginal discharge. She had slept but little for many months, and had digested scarcely any food. The pain in the back was so intense that the late Mr. Lonsdale was consulted, and he is said to have called the case one of "hysterical spine." On examination, I found the womb exquisitely sensitive, its neck considerably swollen, and slight ulceration round the os uteri. Three leeches were applied to the womb; but the loss of blood they gave rise to, and the increase of pain they determined, prevented me repeating the application. I touched the ulcerated surface twice with the solid nitrate of silver, and afterwards with a strong solution at four days' interval; cooling injections were used; and in a few weeks after, the ulceration was healed, the uterine swelling had diminished, but the habitual pains had but little abated, and the rectal injections could not be retained by the patient. Such being the case, I placed one grain of acetate of morphine in a little cotton wool, folded it up, tied a piece of twine round it, and carefully applied it close to the neck of the womb. I then withdrew the speculum, leaving a piece of twine protruding, so that the patient might withdraw the little apparatus at the end of twenty-four hours, during which time no injections were to be made. Three days afterwards I applied two grains of the morphine salt in the same way; and four days afterwards, three grains. The day after this application there was a sudden abatement of the pains; and so great was the improvement, that the lady, who for months had only been able to crawl down stairs, to be carried back to her bed, was able to sit upright for several hours, and was not over-fatigued by a two-hours' drive. This sudden amendment continued, so that in a few weeks she was able to leave for the seaside.

When I have had to do with submissive patients, I have never found this treatment fail in cases of uterine neuralgia, except once, when it was caused by pregnancy, and then, after trying various means, I resorted to this; but it brought on an alarming paroxysm of tenesmic pain, which subsided on the removal of the cotton wool. This patient continued to suffer until delivery, and I think pregnancy would not have gone its full time had I not found in the tincture of Indian hemp an admirable means of mitigating the severity of the pains.

When the patient is married and the case severe, it is better to apply acetate of morphia carefully by means of the speculum and forceps. It may, however, be applied without using the speculum. If the forefinger of the right hand be introduced into the vagina in the usual way, along this finger the left hand can easily glide the forceps, armed with the cotton wool, until the neck of the womb is reached. When possible, I renew this application every second day. In this manner it is easily understood that the fluids in the vagina dissolve the acetate of morphia, and that the solution acts on the neuralgic womb. From the medical journals I find that Dr. Aran, of the Hôpital St. Antoine, has extensively followed the same idea. His plan is, to let fall one or two drachms of laudanum into the speculum previously introduced, fixing the fluid in the vicinity of the womb by a tablespoonful of powdered starch. Dr. Aran repeats the application every second day or every day, and has not seen the treatment followed by symptoms of narcotism. He has found it effectual in cases of uterine or ovarian neuralgia subsequent to inflammatory affections, or complicating uterine deviations. He has, like myself, found it useful in those singular and painful conditions of the womb which occur at the change of life. For the last six months, since I have been aware of Dr. Aran's plan, whenever I have to apply the speculum for the surgical treatment of uterine disease, I conclude by pouring into the tube a teaspoonful of Battley's solution and a spoonful of starch powder, even when no pain is complained of, and it seems to promote the rapidity of the cure. I think, however, that my plan of applying the salts of morphia to the neck of the womb is preferable in obstinate cases of uterine neuralgia, like the one I have related. The question of priority is one of little importance to me; and Dr. Aran's testimony in favour of an idea which I have carried out for the last two years, made me think it worth while drawing attention to the right use of sedatives in uterine affections.

York-street, Portman-square, 1858.

REPORT OF CASES IN THE ROYAL MATERNITY CHARITY, WESTERN DISTRICT.

By J. Hall Davis, M.D.,

PHYSICIAN TO THE ROYAL MATERNITY CHARITY, AND TO THE ST. PANCRAS INFIRMARY.

(*Concluded from June Number, p. 498.*)

In the 12 cases of *hæmorrhage following the birth of the children*,—in the *three* cases appearing before the placenta came away, the afterbirth was at once removed; cold and pressure applied. In one of these three the umbilical cord was broken by the fall of the child under precipitate birth, the patient at the time standing, in which posture she was found when assistance reached her. In two of the three there was morbid adhesion of the placenta, which required artificial detachment. All these patients did well.

In the *nine* cases of flooding, which set in after the removal of the placenta, in all the placenta had come away entire; the flow, with one exception, resulted from a relaxed state of the uterus. A draught of cold water was given, cold applications made to the vulva, and a firm bandage and compress applied. In one case convulsions appeared, seemingly from the loss of blood, and brandy was required to sustain the patient. In *one*, the labour, primiparous, had been only of an hour's duration. In *one* case, the hæmorrhage, which appeared on the twelfth day after delivery, was of the active kind, not proceeding from a relaxed uterus. The patient had been much distressed and excited by a seizure of her furniture for rent. She was at length greatly reduced by the flooding; but with an adequate supply of nourishment and stimulants obtained for her, and with the help of tonics, she was restored to health.

One case of passive hæmorrhage which supervened after the attendant left, proved fatal by exhaustion on the twelfth day after delivery.

In the case of *puerperal convulsions* before and after delivery, in a primipara, aged nineteen,—the os uteri was at first very little dilated; the pulse hard, full, and bounding; the tongue had been wounded during the convulsive action of the muscles of the jaw. The patient's previous health had been apparently good; there had been no ascertainable cause of excitement beyond that of a first gestation, and she was not of a robust habit, or of that appearance and conformation considered as predisposing to this disease, in common with apoplexy. I could not in this case, as I have sometimes traced in others, find that it had originated in any mental emotion. It appeared afterwards that the bowels must have been neglected before labour. The treatment consisted of venesection, purging, the application of cold to the head, and delivery by the forceps, as soon as the os uteri and genital passage would permit of their employment. The child was still-born; the placenta came away easily. The convulsions returned after delivery, but in less violence than before, and continued more or less for five days. The nape of the neck was blistered; cold applications were made to the top and front of the head, according as they were indicated; the bowels, which appeared yet loaded, were freely relieved by enemata and by calomel with croton oil. The patient had a good recovery.

In the case of *rupture of the uterus and vagina*, which occurred in March, 1857, the patient's age was thirty-six. It was her *ninth* labour. The child was born by a head presentation, a female, and not large. The labour was rapid. The "waters" had escaped at two P.M.; labour did not set in till six P.M.; indeed, at half-past four, the os uteri was ascertained to be closed, and the patient was left sitting at the tea-table with her family, not yet complaining of pain. Not till a quarter-past eight was the midwife sent for, on active pains commencing. She arrived at half-past eight, and found the child lying dead on the bed in a pool of blood. The flooding continued, notwithstanding cold applications and bandaging, till near the patient's death, which took place at about ten o'clock the same evening.

At the post-mortem examination, made by order of the coroner, a laceration was discovered extending through the neck of the uterus and upper part of the vagina on the left side, not involving the peritoneal coat, under which there was found, extravasated in patches, some coagulated blood. To the naked eye, there was no apparent pathological condition of the parts to explain the lesion, but we must presume, though we cannot decide positively in the absence of chemical and microscopic inquiry, that an action of the uterus urged the child downwards so strongly against a tissue weakened by degeneration of the natural tissue, that the fatal rent, which took place coincidently with the birth, occurred as a necessary result.

The deaths of mothers in the above 2449 deliveries, from all causes, were therefore three, or 1 in 816; and none occurred in the course of illness from puerperal, or, indeed, from other diseases, while under the Charity's care.

Of the still-births—

27 were premature, at various periods of gestation; 11 of these were putrid, 5 syphilitic.

6, putrid, at near full time; one of the patients had had a fall a fortnight before delivery.

The following were at full term:—

1, a protracted labour, under a head presentation.

5, breech, of which three were males.

1, a breech and funis presentation.

1, a footling: the case where the cervix uteri contracted spasmodically round the neck of the child after the birth of the body.

2, head and funis presentations.

1. a shoulder and funis presentation, with hæmorrhage.

1, a shoulder presentation, delivered by embryotomy.

1, an arm presentation, delivered by turning.

1, an elbow presentation, ditto.

1, hand and funis, ditto.

1, puerperal convulsions, delivered by the forceps.

1, in the case of rupture of uterus and vagina, most probably from the attendant hæmorrhage.

1, the second of twins; birth delayed two hours, completed by the ergot of rye.

2, were twins, males, at full term, but no cause known.

Of the remaining cases, all that is known is, that they were single births, and not attended by any complication or difficulty.

The diseases under treatment during the puerperal month were as follows:—

Breast abscess, one case, poulticed and incised.

Varicose veins, with severe suffering and loss of sleep, one case. The same had occurred before and after previous deliveries. An elastic roller, regulation of the diet, with mild aperients, soon restored the patient to ease.

Chronic bronchitis, two cases treated by the usual measures, with perfect relief.

Peritonitis, six cases, treated antiphlogistically, most by leeches only, followed by hot poultices, and laxatives; others more severe required general bloodletting. They all recovered.

Hysterical palpitation of the heart, no organic disease, one case; antispasmodics, &c.

Hysterical convulsions, antispasmodics, &c.

Fever from drinking spirits and porter, one case; the obvious treatment.

Phthisis, two cases; somewhat relieved at last report.

Harley-street, Cavendish-square, 1858.

ON THE USE OF ROTTLERA TINCTORIA IN TÆNIA AND OTHER INTESTINAL WORMS.

By J. S. Ramskill, M.D.,

PHYSICIAN TO THE METROPOLITAN FREE HOSPITAL.

The anthelmintic powers of kamala have been investigated in India by Dr. Mackinnon and others, and a great number of cases have been published there, illustrating the efficacy of the remedy. In this country, as far as I know, but one solitary case has been recorded; and on this account, as well as on that of the merit of the drug, the history of several successful cases may be interesting.

Kamala is the Hindostani term for the red powder collected from the capsules or tri-coccous fruit of the Rottlera Tinctoria Roxburgh, a tree of the natural order *Euphorbiaciæ*. It is a brick-red glandular powder, resembling lycopodium in the difficulty with which it is mixed with water, and in some other physical qualities. These glandules, brushed from the surface of the fruit, are seen under the microscope to be mixed up with fine stellate hairs and remains of stalks, leaves, &c.

Kamala has little smell or taste; it is insoluble in cold and nearly so in boiling water; but yields an admirable and effective tincture. It is this tincture which I chiefly use, as prepared by Messrs. Hanbury of Plough-court. Those who are interested in the natural history, mode of preparation, &c., of Kamala, will find a paper in the *Pharmaceutical Journal* for February last, by Mr. D. Hanbury, which comprises all that is known upon the subject.

According to my experience thus far, the alcoholic preparation of kamala is more uniformly effective than oil of male fern or than spirit of turpentine, and infinitely less disagreeable than either. In no case where a tænia was known to be present in the intestinal canal, evidenced by fragments occasionally passing away, has it failed to effect its expulsion; and in most cases where the head of the worm has been carefully looked for, it has been found.

Case 1.—On March 3rd, John F——, aged twenty-two, residing in St. George's in the East, was admitted a patient of the Metropolitan Free Hospital, with tapeworm. He first observed that he passed fragments of them six years since. Has passed as much as eleven yards at once; very rarely passed a week without having seen fragments. Formerly was at sea, and lived for long periods on salt meat, both pork and beef; likes salt and vegetables. Has taken turpentine, which did good for a few weeks; objects to take it again. Ordered, tincture of kamala, two drachms; distilled water, four ounces. To be taken night and morning. To have three doses.

March 6th.—By some mistake, the patient swallowed the tincture without water. Felt no result from the first or second dose, but vomited the third, at the same time three or four series of links some inches long passed away, including one tapering to a point (this he had been asked to look for). To repeat the three doses in water.

10th.—The first dose caused purging; the second, violent diarrhœa and vomiting for forty-eight hours. No worm nor fragments passed. Has now eczema of the scrotum, which he insists has been caused by the medicine.

Case 2.—Morris H——, aged sixty-three, was admitted a patient of the hospital on March 6th.

He lives in Glasshouse-fields, Ratcliffe-highway; has had tapeworm five or six years, and has passed long pieces after taking turpentine. This drug has often cured him for six months, but never for a longer period. He is not fond of salt nor of vegetables; eats pork occasionally; suffers considerably from epigastric nervous sensations, faints, &c. Ordered, tincture of kamala, two drachms and a half; water, one ounce; to be taken night and morning. After the second dose some "thousands of bits came away"; the third and last dose purged him very much, and made him feel sick, but he did not vomit. No head found, probably on account of carelessness in the search for it. The bowels continued irritable for some days, but no more fragments of tænia appeared.

Case 3.—Mary P——, aged twenty-one, admitted March 6th. Had tapeworm two years; is very feeble; appetite voracious or absent; complains greatly of epigastric fainting; dislikes salt, scarcely ever eats it with food; always fond of pork, eats it frequently. Ordered, tincture of kamala, two drachms; water, four ounces: to be taken night and morning. The physic operated six times; no pain, no vomiting; worm passed within twelve hours after taking the first dose; head found.

On the 17th she had not passed any further fragments, and observed that she felt better in health than she had done for years.

Case 4.—Emma H——, aged twenty-four, resides at Stepney; admitted a patient of the hospital on March 6th. She first saw fragments of tænia in the evacuations three years ago, and has seen them occasionally ever since. Suffers frequently from fits of "retching, lasting four or five hours together," and is not by any means able to stop it. She attributes this to the presence of tænia. Has suffered from it about three years—i. e., since about the time she first discovered fragments of worm; likes salt, and often eats pork. Ordered, tincture of kamala, two drachms; water, four ounces: to be taken night and morning for three times.

March 10th.—After taking the second dose a great number of fragments passed; none after the third; did not find the head, perhaps did not examine sufficiently closely. She had no pain, purging, nor vomiting, but felt sick, and suffered much for the two days when taking the medicine with headache. To have three three-drachm doses of the tincture as before.

17th.—The physic has made her violently sick, but it was not returned; no diarrhœa. She has not seen any more segments of the worm.

This patient has for the present disappeared, so that it cannot be determined whether the retching was caused by the tænia.

Case 5.—A. L——, aged thirty-six, resides in Whitechapel. First saw that he passed portions of tapeworm three years ago; has suffered during this time with all sorts of nervous feelings; is always in a twitter; he is a member of the Jewish church; they do not eat pork, he dislikes salt, and takes little vegetable with his dinner. Has taken turpentine three times; this drug punished him severely; he could not for a time pass urine. Has also taken the oil of male fern, after which he vomited greatly; he was much purged, and became delirious for seven or eight hours. He was ill for three weeks afterwards, in bed, and under treatment.

March 20th.—Tincture of kamala, two drachms; water, two ounces, night and morning (three doses).

23rd.—Saw three or four joints after the second dose; no vomiting nor diarrhœa. On examination I find he has by mistake only taken one-drachm-and-a-half doses. To increase each draught to three drachms night and morning.

26th.—The first dose caused vomiting, but the medicine was not returned. After the lapse of half an hour, twelve yards of the worm, including the head, was passed. The second dose caused vomiting and diarrhœa, as did also the third, no further segments of worm passing.

Case 6.—Geo. W——, aged eighteen months, admitted on the 20th of March. The child was weaned at five months, owing to the mother's illness. Fragments were first passed a week ago, the same as specimen brought, which was a joint of a full-sized tænia. Some days several joints—that is, five or six, passed. The child has "fallen away very much;" it is always craving for food or drink; it ate meat at six months old; is very fond of it now; has eaten pork. Ordered tincture of kamala, six minims; water, two drachms night and morning.

March 27th.—Some eighteen or twenty segments of worm have passed; no diarrhœa or sickness; the head of the worm has not yet passed.

(*To be continued.*)

LARGE VASCULAR TUMOUR OF THE ORBIT, TREATED BY INJECTION OF A SOLUTION OF TANIN.

By R. Taylor, Esq.,

SURGEON TO THE CENTRAL LONDON OPHTHALMIC HOSPITAL.

E. Y——, a young woman, aged 24, applied to me at the Central London Ophthalmic Hospital, about three years ago, for advice respecting a vascular tumour on the left orbit. The growth, she informed me, was congenital, and had not undergone any material increase in size for many years. The eye was displaced upwards and somewhat inwards, and was protruded so that the cornea was nearly on a level with the bridge of the nose. By gentle pressure it could be restored to nearly its natural position, the tumour at the same time projecting at the lower and outer part of the orbit; when the pressure was removed, the eye was again slowly protuded. There was no discolouration of the skin, nor any pulsation in the tumour. Immediately above the cornea, two small conjunctival veins were dilated into pouches about the size of a partridge-shot. The appearance of the eye was natural, but the sight was very imperfect. She declined submitting to any operation.

She again came to the hospital in March, 1857, the tumour having, without apparent cause, commenced to increase rapidly in size. The conjunctiva was inflamed, the eyeball became daily more and more prominent, and she suffered severe pain in the orbit, darting through to the back of the head. On the upper eyelid, near the margin of the orbit, was a tumour about the size of a horse-bean, which had begun to appear a few months previously. It was tense and elastic; it could not be emptied by pressure; and the skin over it was of a dusky purple colour.

The necessity for treatment was now evident, but the difficulty lay in the selection of the proper means. The growth extended to an unknown depth in the orbit, completely surrounding the eyeball, which was, as it were, embedded in it. The method of injection appeared to be the only one admissible, but I hesitated as to using the usual solutions employed, from the violent inflammation and sloughing which they sometimes occasion, and which, in such a situation as the orbit, might be followed by destruction of the eyeball, and might even endanger life.

At this time I had frequent opportunities of watching the progress of a case of a similar nature, the particulars of which have been recently laid before the Medico-Chirurgical Society by my colleague Mr. Walton. The injection which he employed in this instance was a solution of tannin, and the result was so satisfactory that I determined to adopt his method, and accordingly injected half a drachm of the saturated solution, by means of an Anel's syringe, through a puncture in the most prominent part of the tumour, between the lower lid and the eyeball.

Smart inflammation followed, with a good deal of pain and swelling, but there was no constitutional disturbance; nothing further was required than the application of iced water to the part, and there was no suppuration subsequently. During the height of the inflammation, the growth on the upper lid increased considerably in size, and became very tense; I therefore made an incision into it, and found that it was a cyst containing turbid serum, and having dense, leathery walls, extending deep into the orbit. I succeeded in removing the greater part of the cyst, but a small portion extended too deep to be reached with safety. When the inflammation subsided, all of the tumour which could be felt was found to be completely consolidated; the eyeball was uninjured, but it was fixed and immovable. It is unnecessary to detail the further progress of the case minutely; it may suffice to say, that when I last saw her, about nine months after the operation, the eyeball had assumed a more natural position than it had ever had within her recollection, and that absorption of the tumour was still progressing. The movements of the eye in every direction were perfect, and the vision, such as it was, was unimpaired.

I have reported this case in the hope of inducing others to test the efficacy of the injection which Mr. Walton has proposed as a substitute for the perchloride of iron and the other injections usually employed. The violent inflammation and sloughing which occasionally follow the use of these agents, are probably caused by the free acid which they contain, and which destroys the tissues with which it comes in contact. In other parts of the body, such excess of action may not be of much importance; but in the orbit, where the relations of the morbid growth cannot be accurately ascertained, and where, as in this case, it may completely surround the eyeball, the case is different. Violent inflammation would endanger the safety of the eye, and might even extend through the optic foramen to the brain, while sloughing, to any extent, would be followed by deformity from distortion of the eyeball or lids. It is therefore a matter of great importance to be provided with an agent which, while it induces a moderate amount of inflammation, is not liable to destroy the tissues with which it comes in contact. That tannin is capable of fulfilling these conditions, appears to be probable. Much more experience is requisite before we can form any positive decision as to its merits; but the result in both the instances in which it has been employed, has been sufficiently favourable to warrant a more extended trial of its effects, as well in tumours on other parts of the body, as within the orbit.

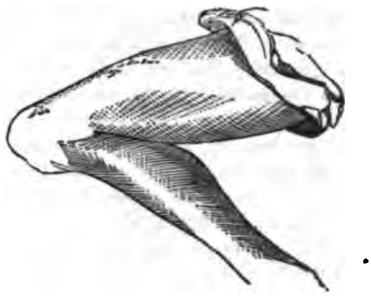
George-street, Hanover-square, 1858.

REPORT OF CASES OF OPERATIONS AT THE KNEE-JOINT.

By A. M. Edwards, Esq., F.R.C.S.E., Edinburgh.

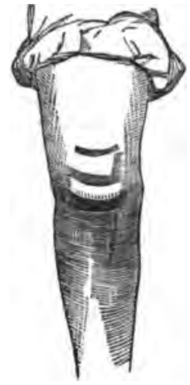
The following cases may be worthy attention, as they illustrate the power of surgery to remedy deformity or disease, or both combined, of the knee-joint.

The first case is that of M. C——, aged twenty-three, a stout, healthy young man, who came under my care last May. Three years before he had fallen from a horse, and sustained a compound dislocation of his left knee-joint. He was treated at a public hospital, where, however, no effort seems to have been made to readjust the displaced bones, and, after eight months' confinement to the ward, he left the hospital, with his limb in the condition I shall endeavour to describe, viz.:—The leg displaced backwards, and firmly anchylosed to the thigh, as seen in the woodcut; the femur projects at least three inches beyond the tibia; the patella is resting upon the condyles of the femur, and quite immovable. In the popliteal space the tendons are collected together, presenting the appearance of *one* thick cord. Anteriorly, the skin over the projecting portion of the femur is thin and tense, of a bluish colour, and tender to the touch. The thigh has a peculiar bowed appearance, and it, as well as the leg, have evidently not grown in proportion to the other limb; but they are still very muscular, the calf being round and firm. His chief complaint is of the awkward projection of the femur, which, he says, is constantly meeting with blows or abrasions, and it is too tender to allow him to wear a wooden leg. He has also been obliged to give up driving a market-cart his friends obtained for him, owing to this unfortunate liability of the deformed limb.



As the left lower extremity was altogether shorter than the other, and as endeavouring to straighten it by operation would necessitate a very severe proceeding, the result of which I thought might very possibly not compensate for the attendant risk, I suggested amputation. This he at once declined submitting to, saying that "if the lump o' bone" were once away, he did not care about the shape of his leg, for which, however contemptible in other people's eyes, he had evidently a decided partiality, and desire that it should remain attached to his person. I therefore consented to straighten his limb, and with that view, after he had been brought under the influence of chloroform, I made an incision on each side of the former situation of the knee-joint, in a curved direction; I then joined these two incisions by another across the most prominent part of the femur. Having dissected the skin upwards and downwards, I sawed through the anchylosis between the tibia and femur, and by a few touches of the knife freed the bone at the back part. I then removed the condyles of the femur, and tried to straighten the limb, but the hamstring tendons were unyielding; so, passing a probe-pointed bistoury on my finger, I divided them one by one, being very cautious not to touch the popliteal vessels. I now put on gradually increased extension, and straightened the limb, bringing the sawn surfaces of the tibia and femur into apposition. One or two small vessels required ligature, but the chief hæmorrhage was from the bone. Having stitched up the flaps, and applied water dressing, I placed his leg on a Macintyre splint, and suspended it in a Salter's swing. He did not complain of much pain after the operation, and had not more constitutional disturbance than might be expected after such a proceeding. He was, however, a most unruly patient, and the satisfactory result is mainly owing to the assiduous attentions of my pupils, Messrs. Mackinnon and Nunn. The only difficulty connected with the seat of operation was, that with the motions of the body the femur changed its relation to the tibia, and was inclined to protrude outwards through the recently healed wound.

About the third week a small abscess burst, from which I pulled an exfoliation, apparently from the edge of the femur. A long thigh splint, adapted to the Macintyre, fixed his trunk very efficiently; but, unless closely watched, he would remove it during the night. In nine weeks he was able to go about on crutches, with a leg of which the second woodcut is a sketch. It is, of course, considerably shorter than the right, but it is very shapely, and by flexing the sound leg, he can, when tired, rest the weight of his body upon it. The seat of union is quite rigid, and with a high-heeled shoe, it promises in time to be a serviceable limb; if not, it will then be quite time enough to remove it by amputation at the thigh.



I have stated the history of this case shortly, because any practical surgeon can easily imagine the circumstances attending an illness after such an operation and during convalescence. I must say that I undertook the task of endeavouring to straighten an already shortened limb somewhat reluctantly, and many will no doubt, even at the present day, question the propriety of the proceeding. It is surprising that after the great results of the operations performed by Dr. Barton, of Philadelphia, surgeons in this country have been so reluctant to follow his example. The probable reason is that the deformed limbs are nearly more or less wasted, and it is only within the last few years that surgeons have begun to doubt whether even a shortened limb is not preferable to an artificial substitute of wood or cork. In the case I have related, Dr. Barton's plan—viz., removing a wedge of bone and gradually straightening the limb, would not have been sufficient, owing to the great displacement of the tibia backwards. In cases where the disparity in size between the limbs is not excessive, I should certainly be inclined to repeat this operation, especially in females, in preference to amputating at the thigh.

Case 2.—C. B——, aged five, a small delicate child, with fair hair and large blue eyes, met with an injury to the left knee-joint at the age of two. The joint rapidly swelled, abscesses formed and burst, his health gave way, and at last a well-known surgeon in this town condemned the leg to amputation above the knee.

In June, 1857, I was consulted about him, and found the limb in this condition: The joint was much enlarged, the leg bent at a right angle to the thigh, with very slight mobility. Sinuses discharged on each side of the joint. There was a languid ulcer on the front of the tibia, which looked as if it were connected with the bone. This right leg is healthy, but wasted. He has never walked for more than two years and a half; he is of a pasty complexion, with white lips; has no appetite, and his rest is disturbed by painful startings of the diseased limb. The disease was evidently more extended as regards the tibia than I should have wished; but then something must be done for the patient, and he did not seem a fit subject for amputation at the thigh. His bloodless condition, flabby wasted tissues, and want of vital energy generally, rendered him a bad subject for any operation; but being obliged to choose one, I selected that I consider more useful in result if successful, and less severe in immediate constitutional effect—namely, excision of the joint.

Accordingly, after a few days' further observation of his condition, I performed the operation with the usual H incision, and found, as I had expected, the tibia more deeply involved than perhaps some of the advocates of this operation would have approved of. From the centre of the bone, a sinus, filled with gelatiniform substance, extended downwards for about three inches. I scooped out its contents, and with my gouge made an opening in the wall of the tibia, so as to communicate with and be a counteropening to this sinus. A piece of lint passed through it, leaving the end hanging out of the external wound. In this case I sliced off the condyles of the femur and the corresponding surfaces of the tibia; also the diseased tissue in the neighbourhood of the joint. The patella was removed. I had a box made with a long splint for this little patient, but the parts lay so well together that I contented myself with a looped bandage. The limb was swung to a common cradle. The operation occupied but a very few minutes. No blood was lost. The child was in bed, and when he awoke from the chloroform, was unconscious of anything that had passed.

There is really nothing of interest in the after-treatment of this case. No fever ensued, and but little pain. At each dressing, the lint in the tibial sinus was partially withdrawn, and the consequent easy discharge of the matter from between the bones allowed the lateral and transverse wounds to heal very rapidly. Gradually the discharge lessened, and five weeks after the operation I could not get a probe to enter. The little languid ulcer over the sharp edge of the tibia now alone remained, but under stimulating lotions it put on a more healthy aspect, and is now (November) almost skinned over. Eight weeks after the operation the child was taken out for a drive; his health has improved, and the diseased limb is daily becoming more useful. The union between the tibia and femur is firm; the shortening not quite one inch. There is no pain, and he can rest perfectly upon the limb, the principal drawback being that the sound leg, from long disuse, is unable to be of that assistance to its neighbour which we generally find so useful when patients begin, after resection, first to walk with crutches and then with a stick. Twelve weeks after the operation, the boy, by leaning his hand against the wall, followed his mother along a passage into another room. For two years and a half previously he had been carried from place to place.

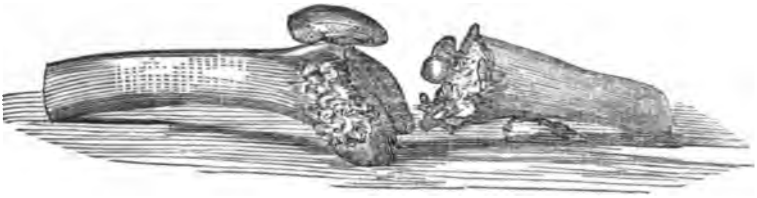
I had no difficulty in this case with the femur, and found the flexible back splint keep the parts excellently in place; the limb was swung to the cradle by strips of bandage. The shifting of the femur is undoubtedly the great difficulty in the treatment of a restless patient, and was particularly so in the case of a boy operated on by Mr. Fergusson, in King's College Hospital, when I was house-surgeon there.

Mr. Fergusson suggested the long splint, and I had one fastened with hooks to a Macintyre. This contrivance proved much more satisfactory than the boxes which had been used on previous occasions; and as the cases of resection were more numerous, became the established splint; it is, slightly modified, described by my friend, Mr. Price, in his papers on this subject. The swing I consider very valuable, especially in the case of a child. If Salter's appears too large, or is not at hand, any one of ordinary ingenuity can extemporise a substitute. There is one thing of still more importance, which I am glad to see Mr. Butcher's powerful pen condemning—that is too soon and too frequent dressing; the limb is, to all intents and purposes, a fractured one, and yet I have seen a surgeon, who would not have moved a broken leg under the circumstances, dress and undress a case of excision of the knee as a little girl does her doll. As to the operation, I shall only remark upon the necessity for complete removal of the diseased portions, and that the surfaces left by the saw should be clean and accurately adjusted. I may illustrate this by the accompanying woodcut of a preparation for which I am indebted to my friend, Dr. Myrtle, of Polmont. The history, sent with the bones, is the following:—

A. S——, aged thirty-three, a miner, consulted me about eighteen months ago, regarding his knee-joint; on examining which, I came to the conclusion that he was suffering from caries of the articulating surfaces of that joint to such an extent as to render it necessary either to amputate the limb or attempt a cure by excising the joint. Having had some conversation with Dr. Brotherston regarding the latter operation shortly before this patient came to me, and believing this to be a favourable case for that operation, I sent him with a note to one of the surgeons of the Royal Infirmary of Edinburgh. He remained in that hospital several weeks, and getting tired of it returned home, having undergone no operation.

His knee got worse, and he placed himself under the surgeon of his collier. About the middle of October, 1856, that gentleman proposed to excise the knee-joint, which he did on the 31st of October, a medical friend and myself being present.

On laying open the joint, we found the patella firmly adherent to the femur, the end of which was rough and denuded of its cartilage to a considerable extent. The outer half of the head of the tibia was excavated by caries to the depth of half an inch, and the head of the fibula was rough and gritty. After removing about three-quarters of an inch from the femur, and above an inch of the heads of the tibia and fibula, the parts were brought together, the patella being left, and the limb was placed on a splint with a very slight double incline. The case at first promised to do well; one or two abscesses formed, which were opened, and in three months the man was sitting by the fireside; but he made no further progress, and in April, 1857, began to lose flesh; the discharge from one or two fistulous openings increased. He continued to lose strength, but would not submit to amputation, which was urged upon him, till the beginning of July, when he begged me "to come and cut his leg off." He was now hectic, sleepless, and had a severe diarrhœa. I requested Dr. Girdwood, of Falkirk, to meet me in consultation, and that gentleman concurring with me as to the propriety of amputation, I amputated the limb in the lower third of the thigh, Dr. Girdwood and his son assisting me, by a combination of the circular and flap operations. In three weeks the patient was on crutches, and in three months he resumed his ordinary employment.



Now, this will be registered as a case in which resection did not succeed in saving the limb, and risked the patient's life for no good end. But I beg the attention of surgeons to the accompanying cuts, which are strictly accurate, and the cause of the ill-success will, I think, then appear to them as it does to me, that not enough of the bones was removed, that it was a partial operation, that the obliquity of the section of the femur backwards and upwards would cause distortion or acute flexion of the limb if the osseous surfaces had been placed in apposition; but Dr. Myrtle, who was present at the operation, says, "the limb was placed on a slight double incline." Therefore there must have been a considerable gap between the surfaces of the tibia and femur. The oblique direction in which the saw was carried, leaving the patella adhering to the femur, must have been a far more difficult performance than sawing the bone straight across, as ought to have been done. There was no want of skill in the use of instruments; but the dexterity was somewhat misapplied, which was unfortunate, not only because it disappointed the surgeon and his patient, but as it may tend to retard the general introduction of this very excellent operation into a part of her Majesty's dominions where at present it is rather unpopular and very rarely performed.

India-street, Edinburgh.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—Morgagni. *De Sed. et Caus. Morb.* lib. 14. Procemium.

LONDON HOSPITAL.

Encephaloid Cancer of the Leg of a Boy twelve years of age; Amputation through the Thigh; Death from Secondary Hæmorrhage.

(Under the care of Mr. Adams.)

A boy, twelve years of age, of delicate aspect, was admitted in January last, with a large tumour involving the entire calf of the left leg, giving it a pyriform shape. It had all the external physical characters of medullary disease, and had rapidly grown during a period of between five and six months. Conceiving this to be the patient's only chance, Mr. Adams amputated through the thigh on the 21st of January, with very little loss of blood. He was placed in bed, and was going on very well for some days, when secondary hæmorrhage occurred from the main trunk of the femoral, which was arrested by Mr. Routledge, the house-surgeon, with a tourniquet. It however recurred, and so enfeebled was the lad, that he succumbed from exhaustion on the twelfth day of the operation.

The following is an abstract of the examination of the limb made by Dr. Andrew Clark:—The tumour occupied the whole leg, and was of a pyriform shape—the base above, the apex below; its greatest circumference measured fifteen inches. It was everywhere invested by the muscles of the leg, which were red, well developed, and glued together by common lymph into a continuous capsule. The tumour lay external and posterior to the tibia (which was free); had a smooth and tapering outline; and felt at most parts hard, yielding with a crackling noise, only upon great pressure with the finger. It was divided from above downwards by a section passing through the shaft of the fibula; and the following were found to be the relations of the growth: It was bounded above by the head of the tibia and the structures occupying the popliteal space; internally and anteriorly by the tibia and the extensor muscles; externally by the greatly-expanded fibula; and posteriorly by the muscles of the calf. Above, the base of the tumour was well defined; posteriorly and below the substance of the growth, it blended into the adjacent tissues. At no point did it exhibit a true capsule; at every point it left the tibia free.

The tumour exhibited the general characters of encephaloid cancer, in different stages of developement at different parts. Its long axis was formed by the enormously-hypertrophied and eburnated fibula; from the sides of which bone sprung spicules of bone, which anastomosed at short intervals and formed an osseous network, close at the centre but coarse and imperfect at the circumference of the growth. This osseous network formed the basis of the tumour; in its meshes lay a whitish, yellowish, or pinkish coloured matter, of the consistence of brain, which yielded an abundant creamy juice on pressure. Internally and above, the osseous network was deficient, and there the tumour had assumed a spherical form and was soft to the touch.

The inferior extremity of the fibula appeared healthy. From the upper part of the malleolus to the middle the shaft of the bone increased in bulk and density; it had a marked fibrous fracture; the medullary canal was obliterated. From the middle of the shaft upwards the bone became expanded and coarsely reticular, its meshes being occupied by the new growth. Looking at the tumour in its most general aspects, it may be stated that the upper third was of a yellowish colour, granular-looking, and rather dry, (state of curative metamorphosis;) that the middle third was characteristically cerebriform and juicy; and that the lower third was almost entirely osteoid. Generally, the tumour was highly vascular. Of the microscopic and chemical examination it will suffice to give a brief summary.

The upper yellow, withered portion exhibited a network of fibres (not soluble in acetic acid, and yet not answering to elastic tissue), in the meshes of which were corrugated nuclei, granule cells, cholesterine plates, and fat.

The purely cerebriform part exhibited a delicate fibrous network, entirely filled with granule cells and free nuclei; the latter were oval, vesicular, sharply defined, studded with fat and other granules, resisted the action of acetic acid, and had an average diameter of $\frac{1}{1800}$ of an inch. The lower third consisted of healthy looking bony tissue, the lacunæ of which were filled with fat, and the Haversian canals with large cells containing nuclei, answering in every respect to the free nuclei forming the middle part of the tumour.

We may observe, that there is scarcely any part of the body that has not at one time or another been affected with medullary cancer; but referring more particularly to the extremities, Mr. Wardrop mentions in his essay on "Fungus Hæmatodes," published in 1809, that "every part of the upper and lower extremities seems to be liable to be affected with this disease. It has been met with contiguous to the ankle and knee joints, on the shin bones, on the calf of the leg, on different parts of the thigh, in the groin, and on the hip joint. It has also been observed about the wrist, in the forearm, in the arm, and over the elbow and shoulder joints." (p. 99.) Examples in illustration of the disease in all these situations have appeared in our "Mirror" and "Clinical Records."

ST. BARTHOLOMEW'S HOSPITAL.

Medullary Cancer of the Antrum, involving the Right Side of the Face and Neck; Ligature of the Common Carotid Artery; Death on the Third Day.

(Under the care of Mr. Coote.)

The following case we give, not so much from the treatment which was adopted, that of tying the carotid artery, as to illustrate the seat of medullary disease in the neck, commencing in the antrum. The patient was an agricultural labourer, sixty-four years of age, who was admitted into Rayere ward, in July, 1857, with fungoid disease of the upper jaw-bone, which had commenced but three months before without pain, and had grown very rapidly. All the neighbouring parts of the face were involved, as the ear, forehead, cheek, neck, submaxillary region, and one side of the nose. The tumour extended into the fauces, descended into the upper part of the pharynx, and thrust the soft palate forwards. After a short time, the most prominent parts not only increased in size, but began to ulcerate, and bled daily to the extent of a small teacupful. He now became pallid, and was becoming rapidly exhausted, although he was supported by brandy, beef-tea, arrowroot, and other nourishment.

On the 12th of August he was seen by Mr. Lawrence and others, when it was determined to tie the sheath of the common carotid. This was done, under chloroform, at half-past two o'clock of that day, by Mr. Coote, and the vessel secured in the usual way, just above the omo-hyoid muscle. No blood was lost, and the operation was soon performed. The ligature was followed by cessation of pulsation on that side of the head in all the arteries, the tumour became pale, and the black veins came out more prominent.

On the 13th, pulse 84, with some power. The only complaint after the operation was difficulty of swallowing, which lasted a short time. He had, however, passed a good night, and had taken some beef-tea and wine-and-water. On the tumour giving evidence of losing its vitality, an opium lotion was ordered to its raw surface.

On the 14th, the pulse was more rapid and feeble, 90 and 100. In the course of the afternoon, sudden incomplete hemiplegia ensued, the arm and leg became powerless. No bleeding occurred from the tumour, which was quite flaccid and dark in places. Death ensued on the morning of the 16th.

The arachnoid was found to be generally thickened and opaque from chronic disease, with a large amount of sub-serous effusion, which also filled the ventricles. The substance of the brain was firm and healthy throughout. The artery was found to be tied in its proper position; a soft, red clot, three-quarters of an inch long, tapering to the extremity, was found above and below the ligature.

An examination of the diseased mass showed it very clearly to be medullary cancer, commencing in the antrum.

WESTMINSTER HOSPITAL.

Incipient Talipes Equinus, consequent on injury to the Spine.

(Under the care of Mr. Holthouse.)

Amongst the varieties of club-foot, is that known as "talipes equinus," in which the heel is raised, so that the patient walks on the ball of the foot. This appears to be exceedingly rare as a congenital affection, although commonly arising from paralysis or some similar cause after birth. Mr. Brodhurst, in his work "On Club-foot," states that paralysis is the most common cause of this form of talipes. "The toes are pointed to the ground, and the heel is raised, the muscles of the calf of the leg being retracted. It varies in degree, from inability to flex the foot beyond a right angle, to a vertical position of the foot, the heads of the metatarsal bones and the phalanges supporting the superincumbent weight."—p. 82.

In the following case the deformity was in an incipient stage, and would have gone on to its full development had it not been arrested by early treatment. The cause producing the deformity was partial paralysis, from a fall received three months before, which disappeared, but left a condition producing a weakness of the limbs. The boy, when he left the hospital, was able to walk naturally.

T. M——, aged thirteen, a healthy-looking boy, was admitted into Mark ward, under the care of Mr. Holthouse, Oct. 21st, 1857, for a feeling of weakness across the loins and a lameness of the left leg. He walks with a limp, and the heel does not touch the ground. On placing him on his back, and putting his feet together, no difference is observable in the length of the limbs, and the hip-, knee-, and ankle-joints are free from disease, and perfect in all their movements. The left foot can be flexed to the same extent as the right. When the boy attempts to stand, as soon as the left foot touches the ground, he says his "leg jerks him backwards;" and such was found to be the case. He has no other ailment; he eats, drinks, and sleeps well; his bowels act regularly, and he passes his urine naturally.

History.—Three months ago, while getting a ball from the roof of a house about thirty feet high, the ladder on which he was slipped, and he fell to the ground, his chest coming into contact with a compost tub as he fell. Immediately after the accident, he was taken to the Westminster Hospital, and remained there a week, the symptoms being, he states, pain in the side, and weakness of the lower extremities, so that he could neither walk nor stand; he was also unable to pass urine. The treatment, he says, consisted in blistering the side, and drawing off the urine by catheter.

Treatment.—He was kept in bed for ten days, to see whether rest would procure any amendment; but none taking place, a seton was made in the left side of the spine, opposite the first lumbar vertebra.

Nov. 20th.—He can walk much better, but the heel, though less raised, does not yet touch the ground.

29th.—He was allowed to get up. He can now walk about with scarcely any perceptible lameness. The seton was removed.

Dec. 4th.—Discharged at his own request. For the last three or four days he has been walking about the ward without any inconvenience, the heel being quite on the ground. The wound caused by the seton was healed.

ST. MARY'S HOSPITAL.

Nearly Impermeable Stricture for Seventeen Years, Cured by Syme's Operation of External Division.

(Under the care of Mr. Coulson.)

The case which we briefly notice is a remarkable example of the benefit to be derived from Mr. Syme's operation, when applied in a proper manner. It is unnecessary for us to reopen the debate on the merits and demerits of the perineal section; but we think it will hardly be denied that any other mode of treatment could have produced so speedy a cure as the operation adopted by Mr. Coulson in the following case. We take the present opportunity of mentioning that a wide distinction must be drawn between perineal section—a term in constant use—and Mr. Syme's operation of external division of a stricture. The two measures are quite different and distinct, as we had occasion to point out in a former "Mirror," when describing a case of permanent stricture at the London Hospital, under Mr. Curling's care, which was cured by Syme's operation. In Mr. Henry Thompson's valuable monograph on Stricture, this subject is ably discussed, and the student will gain all the information required, in the ninth chapter of that work, which is especially devoted to the treatment of stricture by external incisions.

Thomas P——, forty-four years of age, was admitted on the 7th October, 1857. This patient has laboured under a stricture of the urethra for the last seventeen years. The contraction of the canal supervened on a gonorrhœa of several months' duration, continued ever since, and has latterly become almost impermeable. During the first year the stream of urine was small, but for the last two years it has become a mere dribbling. About twelve months ago the patient suffered from abscess in the perinæum. A No. 1 catheter was twice passed through the stricture at that time, and subsequently the patient was in the habit of passing bougies down to the stricture, but could get no further. The contraction exists just in front of the membranous portions of the canal. Here the urethra is so closely contracted that a very fine instrument only can be introduced.

Having succeeded in introducing a small grooved staff (Syme's No. 1), Mr. Coulson performed the operation of perineal section in the usual manner. A No. 8 catheter was introduced and kept in the bladder for three days. An opiate was administered at bedtime.

On the following day (15th) the patient still felt somewhat depressed, and five ounces of brandy were given.

17th.—The urine flows easily through the catheter; only a small portion escapes through the wound in the perinæum.

24th.—The patient has continued to progress in a very favourable manner during the last few days. His general condition has been good, and the wound is doing extremely well; only a drop or two of urine now escapes through it when the patient passes urine. The catheter was passed once a week from this time, and at the end of a month the patient left the hospital cured.

ST. GEORGE'S HOSPITAL.

Sero-sanguineous Oozing from the Ear, after a blow on the Head; Probable Fracture of the Base of the Skull; Recovery.

(Under the care of Mr. Cutler.)

The discharge of a thin watery fluid from the interior of the cranium is pronounced to be of rare occurrence by many surgeons of high authority, and, when co-existent with a fracture, is pathognomonic of that class of injury through the base of the skull. It may present itself in three different situations—the ear, the nose, and a wound in the head, as may be learnt from Erichsen's "Science and Art of Surgery," p. 276:—"This discharge usually takes place through the ear; but it may occur from the nose, of which I have seen one instance, and Robert mentions another. Still more rarely it takes place from a wound in the scalp communicating with the fracture, percolating through this, and so being poured out externally. The only case of this kind with which I am acquainted is one which was communicated to me by one of the pupils of the College, as occurring at the Penrhyn Infirmary a few years ago." The case referred to was that of a boy with depressed fracture of the back of the skull, with a wound, resulting from a blow. On the 19th day a quantity of serous fluid began to discharge from the wound, which continued profusely until death from coma, four days after. As this serous oozing, when pouring from the ear, is the most certain sign of fracture of the base of the skull, the prognosis is necessarily very serious. Cases of recovery, however, are to be met with, which hold out hopes to the surgeon, even in the apparently most desperate cases.

In a previous "Mirror" we recorded an instance at University College Hospital, of fracture through the skull's base, attended by a watery discharge from the ear, in which recovery ensued. It was the second recovery of the kind in that hospital. To-day we give another instance, from St. George's Hospital, wherein the symptoms of grave mischief do not seem to have been so urgent; yet a serous discharge, mixed with blood, continued from the right ear for several days, then gradually ceased, and a good recovery was made. Taken with the nature of the injury, we think there is a reasonable probability that there was a fracture, perhaps not extensive, at the base of the skull. The patient's age is not given, but, if we remember rightly, he was a young man. The notes of the case, with the one given after it, were kindly furnished us by Mr. Ernest Hart, surgical register to the hospital.

J. H.—— was admitted into the Oxford ward, having received a severe blow on the side of the head, which partially stunned him. On recovering a little he again felt faint, and soon became insensible. He was unconscious when brought to the hospital, an hour and a half after the accident, and remained so for some hours. He could be partially roused by unusual stimuli. The pulse was feeble; the skin cool, except at the head, where the temperature was higher than in the rest of the body. A sanguinolent serous fluid oozed from the right ear to the quantity of nearly an ounce. There was no wound of the meatus. In the course of the night he awoke, and complained of considerable pain at the back of the head. The head was shaven and cold applied, and calomel exhibited in small doses. The next day slight serous discharge continued; hearing dull on the right side. In the course of the week the discharge changed its character; on the fourth and fifth days it was scarcely perceptible, but on the sixth day there was a slight discharge of ill-smelling pus, which increased on the next day. This continued for three days; in the next week it ceased. The head-symptoms, in other respects slight from the first, had continuously abated; and by the adoption of careful abstinence and enforced repose, he was enabled, at the expiration of three weeks, to leave the hospital, he desiring to do so.

He has since been twice seen; is well in health, and does not complain of any inconvenience from the accident. He has as yet, by direction, abstained from any kind of labour. Hearing is not equally good on the right with the left side; but he enjoys a very fair power of hearing even with the right ear.

Serous and Sanguineous Oozing from the Ear after a Fall on the Head from a Wagon; Probable Fracture of the Base of the Skull; Recovery.

(Under the care of Mr. Tatum.)

The injury in the following case was much more severe than in the preceding instance; blood dripped from the ear continuously, gradually becoming serous, and lasting for three days, when it ceased, and recovery ensued. In the notes of both these cases there is mention made that there was no wound of the meatus. Now our readers will understand that it is by no means necessary there should be a wound in this situation accompanying the injury, for fracture of the base of the skull generally results from a *contre coup;* and if across the petrous portion of the temporal bone, clearly accounts for the oozing from the ear. We regret the notes are not more full in their detail, from the necessarily important nature of the injury in both cases.

J. T—— aged fourteen, a patient recently in the hospital, was admitted after a fall from a wagon, by which his head was brought in contact with the kerbstone. He was insensible for some time, but when brought to the hospital was partially conscious. He vomited very frequently, and suffered from distressing nausea. Blood dripped from the right ear continuously, becoming gradually more thin and serous. This oozing of blood and serum continued at intervals for three days. No discoverable wound of the meatus existed. Hearing was dull in the ear affected. The vomiting soon ceased. The head was shaven; and action of the bowels procured with difficulty. The symptoms were of the most favourable kind, and, after the case had been under observation and treatment for a short time, gradually subsided, and he was discharged convalescent.

GUY'S HOSPITAL.

Pompholix in a Girl, aged seventeen, Existing since Birth: Relief from Treatment.

(Under the care of Dr. Addison.)

Of the various skin affections which present themselves for notice, one of the most curious, and, perhaps, uncommon, is that known by the name of pompholix: we prefer to use this term, which was first used by Willan and Bateman. The various French writers on diseases of the skin, amongst whom may be mentioned Cazenave and Gibert, call this affection pemphigus. The following extract from the writings of the latter author gives, in a few words, a correct idea of the disease.

"This eruption is characterized by bullæ (blebs) filled with serum, which are rapidly formed upon an erythematous patch of the skin, and acquire a size varying from that of a pea to a nut, or even an egg. These serous tumours, precisely analogous to those produced by the application of cantharides, soon allow the fluid which they contain to escape, and dry up in small delicate squamæ, which leave behind them a slight mark."* When once seen this disease is not soon forgotten, and is easily recognised. There are several varieties of it, the two principal being, as described by Willan, according to the progress and severity of the symptoms which accompany it, the *Pompholix benignus*, a mild form common to children teething, or delicate young persons, and the *Pompholix diutinus*, or chronic form, described as a long and painful affection, met with in bad constitutions, depending upon a variety of causes, of which insufficient nourishment is not one of the least important. The case which we bring under notice is an example of the second, or chronic form, commencing in childhood, and continuing without intermission to the present time. The blebs formed in the mouth as well as on the skin, and we have no doubt, unless the occurrence of puberty may produce a change for the better, that she will have them along the alimentary canal, and become a great sufferer. When this is the case, the patient has a sensation of burning coals moving about in the intestines. We recollect seeing two instances of pompholix in the Hospital of St. Louis, in Paris, in which the whole tegumentary system was involved, in two old women; the affection was incurable, and terminated fatally in both. The simple and mild form of the disease is often simulated; we to-day also record an instance of the kind recently occurring in University College Hospital.

The following is an abstract of the case from the notes of Mr. J. W. Addison, one of the clinical clerks:—

Mary Elizabeth R——, aged seventeen, was admitted July 1st, 1857. She states that from her birth she has been covered with blisters, first in one place then in another. The whole surface of the back is marked with numerous scars. She never has had any dangerous disease. Sometimes the blisters come inside the mouth and on the tongue; some are painful, others not at all. Everything she takes causes sickness and vomiting; her bowels are never open without taking medicine; she states they have not been open for three weeks. On admission she presented a wasted appearance; the fountains of the chest normal; urine not albuminous; micturition natural. On the 4th, when seen by Dr. Addison, he pronounced the disease to be pompholyx, and ordered compound iron mixture, three times a day. She has a large blister on her hand, and has had her bowels relieved without medicine.

July 7th.—Another blister has this morning appeared on the tongue; complains of shivering, which continued for three days, and then ceased.

14th—The blister on the hand broke. She has taken quinine since the shivering commenced.

On the 15th, steel mixture, conjoined with aromatic spirits of ammonia, was ordered, which agreed well with her.

22nd.—Another blister on the tongue; her health was pretty good, and she walked about all day.

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* Shepard's Translation of Gibert, 1845, p. 79.

There was no great improvement up to the 12th of August, when Dr. Gull, who saw her for Dr. Addison, ordered one drachm of the syrup of iodide of iron, twice a day, and cod-liver oil, also twice a day.

On Sept. 9th the skin was very red and inflamed over the abdomen, but she is in good spirits, and her bowels regular.

23rd.—The skin has broken, and is very sore over the abdomen. Dr. Addison ordered it to be well dusted with flour. In a week from this all the blisters had dried up, and she was much better.

She left the hospital at the beginning of January, on the whole much improved in health, having continued her medicines. The disease was not, however, cured. There was a peculiarity about the bullæ worth noticing: when the fluid within them was clear and watery they were not painful; but if they contained a deep yellow serous-looking fluid, they were extremely painful. Almost every part of her body was subject to them, her mouth, fingers, &c. She had not attained puberty, and her breasts were incompletely developed; she would have been called good-looking were she not disfigured by the remains of her disease.

ROYAL FREE HOSPITAL.

Scirrhus of the Cervical and Inguinal Glands, with extensive Brawny Swelling of the entire Leg.

(Under the care of Mr. Weeden Cooke.)

Our attention was drawn to this case on account of the extreme hardness of the affected glands. Those at the groin were evidently connected with a chain similarly enlarged in the cavity of the abdomen, and so pressed upon the lymphatic vessels as to materially interfere with the circulation through them, which thus accounted for the peculiarly distinctive nature of the swelling of the whole of the right leg, so conspicuous in many cases of scirrhus, perhaps more commonly met with, as a rule, in the arm than in the leg, an example of which is at present under treatment at the Cancer Hospital, in a young woman, aged thirty, with cancer of the breast and axilla.

The following extract we were favoured with by Mr. W. Curran, late house-surgeon to the hospital:—

Harriet M——, aged forty-eight, a housekeeper, of very temperate habits and sallow complexion, was admitted for cancerous disease. She is the mother of two children, who are now full grown and healthy. Has been a widow for nineteen years; and during that time has enjoyed what she calls "wonderful health." This, however, was interrupted six months ago by an "attack of cold" in the right side, which affected various parts of her body, and at last "settled in the glands of the neck." A sudden hardness and enlargement of the cervical glands ensued, without pain, but subsequently producing a feeling of faintness and prostration. She was treated by liniment and tonics without relief. Her left leg became swollen and puffy in November last; her thigh became subsequently in the same condition; and for the first time, two months ago, she noticed an enlargement of the glands of the groin. With this has been associated general uneasiness, flatulence, and borborygmi; frequent griping, tenesmus, and bearing down about the rectum; with almost constant desire to pass flatus. A "dragging" sensation of her inside is also complained of, and a "dreadful taste" in her mouth. Catamenia have ceased for the last four years.

The prominent features on admission were the enormous swelling of the right leg and thigh, which was of that peculiar brawny character—the result of interrupted circulation—met with in cancerous disease. The inguinal glands were extensively enlarged from true scirrhus, as were also all the cervical glands on the right side of the neck. All these glands were extremely hard to the feel. On admission she was put upon dilute sulphuric acid and bark, with the most generous diet, which improved her general health for a short time, when clear indications became present of cancer affecting both the liver and stomach, and she left the hospital. A few days after going out she died rather suddenly, but no post-mortem examination was obtained.

ROYAL OPHTHALMIC HOSPITAL, MOORFIELDS.

Report of the Operations Performed by the Surgeons during the First Quarter of the year 1858, *from January* 1*st to March* 31*st.*

The number of operations of various kinds, which Dr. Bader, the house-surgeon to the hospital, denominates as major, which were performed within the period of the quarter, amounts to 223; many of these were of much interest and importance. Our space permits our giving only some of the more striking.

Excision of the Globe was performed twenty-three times, as follows;—

One case of staphylomatous enlargement of the globe after purulent ophthalmia; one case of strumous deposit into the ciliary processes, with perforation of the sclerotic; one case of injury to the one eye, keeping up sympathetic suffering of the other; one case of general inflammation of the globe, consequent upon injury; and one case of what appeared to be strumous deposit behind the crystalline lens. In the last case (a patient of Mr. Streatfield) the cornea and crystalline lens were transparent, and behind the lens a bright yellow non-vascular mass was perceptible. A section of this eye proves the yellow appearance to be caused by the detached hyaloid and retina being intimately adherent to the posterior lens capsule. It is not often the case that the cornea and lens retain their transparency when the posterior parts of the eye are thus changed.

Of the next ten cases, three were for staphylomatous enlargement of the globe; four were cases of acute inflammation of the globe, in which vision had been destroyed by former inflammatory attacks; two cases without active inflammatory symptoms in the diseased eyes, which were removed to prevent their compromising the healthy eyes; one case of some congenital disease of the deeper parts of the globe, with loss of vision and recent inflammation, affecting the sound eye. In several cases the outer canthus was divided to allow the staphylomatous globe to press through the palpebral aperture. The bleeding (generally inconsiderable) is best stopped by continual application of cold water, keeping the palpebræ open with the speculum; the introduction of lint does not answer as well. Of the above globes, three are particularly interesting. One (excised by Mr. Dixon) inflamed during the recovery of the other eye from extraction. Cataract had existed in both, and had been successfully extracted from the right eye. Three weeks after the operation the left eye inflamed; pain, &c., continued for two months, and the globe was removed to save the right eye. Mr. Dixon divided conjunctiva, superior, inferior, and internal rectus, (without using the hook) and the optic nerve. The globe advanced out of the orbit, and the external rectus and remainder of its soft attachments were divided. A quantity of lymph had been deposited throughout the vitreous humour, and by its changes, shrinking, &c., had detached the retina. In a case (of Mr. Poland's) excised for melanosis of the globe, the development of the cancerous growth (from the choroid near the yellow spot) was distinctly seen. The melanotic mass consisted of millions of transparent tubes, which, commencing in the choroid, branched out and opened into the eye; to the different branches long oval cells were attached; the branches and cells were surrounded by rust-coloured blood-corpuscles and pigment débris. The growth had filled the globe within a week, and had caused effusions of lymph on the outer surface of the sclerotic beneath the insertions of the oblique muscles, which rendered excision somewhat tedious. Six hours later the contents of the globe formed a smeary chocolate-coloured mass, none of the tubes being recognisable. In the globe which had been removed for some congenital defect and pain, &c., by which it compromised the good eye, an irregular shaped dead white mass (the lens) had been visible through the cornea, and dilated pupil suspended in the transparent ciliary pigment. On opening the globe, a fibrous cord was found attached (on the surface of the retina) to the portion round the yellow spot and entrances of the optic nerve, and thence stretching through the vitreous humour, was inserted into the hyaloid fossa, to whose anterior surface the dead white shrivelled lens was firmly adherent, so that on dragging it with a needle the retina was detached to the extent of the insertion of the fibrous cord; the latter enclosed numerous bloodvessels, most of which branch backwards before reaching the hyaloid, and form the central point of insertion for the transparent strings, which originate from the inner surface of the hyaloid, and by their number appear to cause the consistence of the vitreous humour.

Of the remaining eight, one was for injury, two for staphyloma of the ciliary region, two for staphyloma corneæ, two for "chronic glaucoma," and one for epithelial cancer encroaching upon the sclerotic. Mr. Dixon has modified the usual operation by first dividing the internal rectus, so as to leave a long stump of tendon to seize by, then dividing the optic nerve, after which the globe is turned out of the orbit; the remainder of the soft parts are separated. Mr. Bowman contracts the opening in the conjunctiva by a suture when the bleeding has entirely ceased. Amongst the pathological changes of the above globes the following may be mentioned:—In globes with staphyloma corneæ and several fistulous openings of long standing in the staphylomatous portions, the vitreous humour had a peculiar consistence; it was of normal amount and transparency, but when cut or lifted offered a more than usual resistance to the instruments. To venture a theory, its more fluid constituents had drained away, leaving its thickened though transparent framework.

Eyelids.—Two cases of injury by lime, producing adhesions of the palpebral to the ocular conjunctiva. In the one case the adhesions were divided with scissors, and their reunion prevented by the frequent introduction of a probe; in the other case, in the left eye, the whole of the palpebral edges were adherent to the globe, and the cornea exposed to the air covered by dry cuticle of a gray colour; the adhesions were divided with scissors, so as to admit an artificial eye, which the patient at present wears with great comfort; in the right eye the adhesions were only partial, admitting the tears, and covering the cornea, which was transparent at the upper part; the non-adherent portion of the upper lid was inverted. The eyelashes were dissected off, and, by a second operation, the adhesions separated with scissors, the outer canthus enlarged to admit a speculum, and an artificial pupil made opposite the transparent part of the cornea, the adhesions re-formed in spite of many attempts at prevention, and the patient, when the lid is drawn upwards, can count fingers as he could before these operations.

Cornea.—In a case in which the upper part of the cornea was leucomatous and protruding, its lower part transparent, it was proposed to excise an oval piece out of the leucomatous portion, and extract the lens. On opening the cornea no lens could be found, and one-third of the vitreous humour having escaped, the operation was discontinued; three weeks later the corneal section had healed, and the patient had perception of light as before the operation.

In a case of lead deposit on the cornea opposite the pupil, the deposit was scraped off with the convex edge of a knife. The cornea has, during three weeks, remained transparent.

One case of *conical cornea* treated by Mr. Critchett, by extraction of both crystalline lenses. The right eye had been successfully operated upon two months before; the left lens was broken up with the needle on the 22nd of January. On the 23rd, the swollen lens substance was removed by a small corneal wound. The consequent pain and irritation (treated by leeches and hot fomentations) subsided after a fortnight, when the patient left the hospital; three weeks later he was able to read ordinary type with a strong concave glass (No. 17). The defect of vision commenced after a severe illness (affection of the spine) ten years ago.

Iris.—In January there were one case of acute, and two cases of *chronic glaucoma*, treated by excision of a portion of iris in either eye. The acute case completely recovered, with capillary hæmorrhage; the two chronic cases are improving. In cases in which the operation has been successfully performed, the aqueous humour is not accumulated in the anterior chamber, but appears to escape through the wound as it is secreted. No active inflammatory symptoms have occurred during the after-treatment, as one would expect after so severe an operation.

In March there were five cases of *chronic glaucoma;* ophthalmoscope: cup-shaped entrance of the optic nerve. Treatment by an excision of one-fourth of the iris. In two cases, in both; in three, in one eye only. In the eyes operated on the cup was recognised before the operation, one of the eyes suppurated; two of them were not improved; one was slightly, and one considerably improved by the operation. As for outward appearances, the thinning and discolouration of the sclerotic appears to be proportionate to the advance of the disease.

SAMARITAN HOSPITAL.

Three Cases of Menorrhagia, two of them depending upon the presence of Uterine Polypi, successfully treated.

(Under the care of Dr. Routh.)

Case 1. *Uncomplicated Menorrhagia.*—Mrs. P——, aged about twenty-five, of a leucophlegmatic habit, spare and thin, had been an out-patient frequently prior to August, 1856, at this hospital. The disease was menorrhagia, which usually yielded readily to quiet, dilute sulphuric acid, oxide of silver, or bitartrate of potash. In August, 1856, this patient became again an out-patient under Dr. Routh. She had been married some years; had never had any children. About two years since had a miscarriage, which she attributed to excess of dancing, an occupation to which she was addicted. She was usually regular, but the catamenial flow was always very abundant, sometimes persisting for weeks; clots frequently passed. During the interim there was much leucorrhœa. At this time she was labouring under one of these attacks of menorrhagia. She was very pallid; pulse weak and frequent; she herself very weak and low spirited; eyes bright, with deep darkish furrows beneath them. The patient objected a good deal to an examination; it was, therefore, not pressed. She was ordered oxide of silver, three grains, with half a grain of extract of cannabis Indica, three times a day; quiet, cold ablutions. These failed. Ten grains of gallic acid, with dilute sulphuric acid, were now given every three hours. The discharge gradually diminished, but did not quite cease till ten days afterwards, leaving her, however, weak and exhausted.

In November following she again presented herself. The same symptoms were present, only that the flow was more copious; the debility greater; the face very pale. There were no symptoms indicating hepatic congestion. An examination was proposed and acceded to with great difficulty, and only permitted to be hastily made. The os was hard, prolonged, but pale. The sound passed readily; its passage, however, not increasing the flow of blood; mass of uterus not enlarged. The examination seemed to produce so much mental distress to the patient, and she so strongly discountenanced its employment, that it was not proposed a second time. She was ordered to keep her bed; cold affusion was employed frequently; gallic and sulphuric acid with opium, oxide of silver and hemp, given by turns; but all failed. The menorrhagia continued; the exhaustion was greater; the vagina was plugged; but still no permanent result followed. She was, therefore, ordered five-grain doses of acetate of lead, with five minims of tincture of opium, some dilute nitric acid, and water, every hour; every night a purge of sulphate of magnesia, acidulated with sulphuric acid. After the first day of this treatment, the flow sensibly diminished. The medicine was only given now every two hours, afterwards every three hours; and by the third day it had ceased altogether. There was no colic; the bowels had been freely relieved; but violent sickness now came on, and which continued unremittingly for a week. There was no pain over the stomach. A mustard poultice was, however, applied to the epigastrium; ice was frequently given, and nutritive injections to support the strength. Effervescing mixtures were also ordered. In about a week from the first attack of nausea, and three weeks from the date of her being seen, she was convalescent, but very weak.

This case is a good example of the treatment of menorrhagia by *general* measures. Respect to the patient's feelings prevented the dilating of the os uteri and examining the lining membrane of the uterus, which it was believed was the principal part at fault. These attacks, we have no doubt, will recur.

Case 2. *Menorrhagia; large Polypus in Utero.*—M. R——, aged fifty-two, of a ruddy countenance; generally in good health; has had five children, three still-born; the third labour was severe, the child a footling. She was bled twice during pregnancy, and once after labour, for supposed matritis. When not pregnant, catamenia usually recurred every three weeks, abundant, always in clots. For two years last January, it came on more copiously, recurring frequently once a fortnight, lasting seven or eight days, and sometimes continuing till what would have been the next period. If she wore a napkin tightly on, the hæmorrhage would not be so great; but if she went without one, it came on copiously; it never came on at night when in a recumbent position, but was instantly brought on by the erect position. She has been taking quantities of medicine for the last two or three years, but this only relieved her for the time; has never been examined, or asked to be so.

Examination.—The finger being passed up, a tumour about the size of an egg was found occupying the vagina. Tracing this upwards, it was found to issue, by means of a pedicle, from the os uteri, which was patent. The examination was accompanied by some hæmorrhage. A sponge tent having been passed upwards into the uterus, at the side of the pedicle, to bring out as much of the polypus as practicable, the next day it was removed by the double action ecraseur of Matthieu, being first forcibly pulled down by a tenaculum. No hæmorrhage followed its removal, nor was there even any oozing from that period.

CASE 3. *Small Polypi, in bunches and separate, in Utero; Menorrhagia.*—B. B——, aged sixty-four, a widow for the last seven years; occupation, domestic; aspect, care-worn and melancholy; face, ruddyish, but sallow, stringed with veins. As a young woman, was generally in good health and strong; always regular, *even during pregnancy;* catamenia began at fifteen; she frequently passed clots. Twice married: first marriage when twenty-one years old, she never went her full time, or had any living children; usually at the third or fourth month miscarried; had seven miscarriages; these were generally preceded by floodings, which came on with what she calls "inflammations of the lower part of abdomen and bladder," requiring leeches and venesections from both arms. Her first husband died about sixteen years from her marriage. She then remained a widow four years, and married again. During the period of her first widowhood she had no floodings, but several inflammations of "her lower parts" and obstructions in the bowels. She lived with her second husband thirteen years, but was never pregnant during this period. Catamenia ceased suddenly at fifty. Four years ago, hæmorrhage came on from the womb, at first little by little, at last it became excessive, to such a degree that she could scarcely go about. There were no large clots or bloody masses, but bloody strings, like the white of an egg, which fell out "all at once" after severe bearing down pain. Has been under treatment for several years, but without amendment. Never examined before, or asked to be so.

Examination.—Constant oozing of blood from the vagina; no smell; os very small, scarcely admitting the sound, which does not penetrate three-quarters of an inch up the uterine cavity; os smooth, not hard; large drops of blood, however, every now and then exude from it.

The patient was admitted into the Samaritan Hospital. The os was gradually dilated by sponge tents. After two or three days, it was large enough to admit the finger. The surface of the uterine mucous membrane was now found to be studded with small bodies, about the size of beans and peas, in large numbers about the internal os, but generally scattered over its whole surface. Those about the internal os were larger, and when the speculum was forcibly pressed against the os uteri, this was in part opened, and small polypous masses could be seen protruding. These were removed by a pair of pincers, being first twisted, and forcibly extracted. The resistance of some of these, and the size of the pedicles, prevented the scraping out of those in the cavity by a curette. The patient was therefore left for a few days, till an instrument could be devised for their removal.

At the suggestion of his colleague, Dr. Savage, Dr. Routh had an instrument prepared by Mr. Coxeter, the best idea of which is, that it was like an ordinary silver spoon, with the projecting convex portion removed, slanting inwards towards the handle, the upper and therefore most projecting convex end being made so as to cut.

The os having been now dilated for two or three days successively, as before, by sponge-tents, the instrument was introduced, and the polypi gradually removed by thin slices, till the mucous membrane of the uterus felt quite smooth to the finger. There was very little hæmorrhage, but for some hours a good deal of colicky pain, which, however, gradually passed away. A solution of iodine, first of one part to three of water, then to two of water, then in equal parts, was now thrown up once or twice daily for two or three days. The strong solution produced a little pain for some hours. Finally, by means of Simpson's instrument, a little powdered caustic was introduced on the fourth day after the operation. This caused no uneasiness, and the patient was left to herself. Ordered a gentle tonic, and the douche daily. The discharge gradually diminished, till, when she left, it was nearly entirely watery. It was thought wiser not to check this last too soon, a drachm of bitartrate of potash being given every morning to relieve the habitually congested habit of the parts.

This case is full of interest. The question might be asked—Was the catamenia which she had during former pregnancies in any way connected with these small polypoid growths? Again, this is a case which proves the immense advantage to be derived from digital examination of the lining membrane of the uterus; nor do we think, looking to the size of some of the polypi, anything short of the scraping of the uterine mucous membrane with an instrument like the one devised could have effectually cured the patient.

CANCER HOSPITAL.

Fungus Hæmatodes covering the entire Forehead and Upper Part of the Face.

(Under the care of Dr. Marsden.)

A third example of medullary cancer had all the characters of true fungus hæmatodes, as occasionally met with, and which so well express its appearance and progress. The mere irritation of a small tubercle on the forehead was sufficient to call out the malignant tendencies in this patient's constitution, and in the course of a short time its growth was rapid, the skin became red, ulcerated, protruding forth masses of fungus, which poured out blood. We do not remember seeing such a terrible looking case as this, although we have at times seen severe examples, invading the glands about the neck. The means of treatment were inadequate to do more than palliate. No amputation could be resorted to in this situation; had it been done the amount of bleeding would have been so great as to have produced, in all probability, death on the operating-table.

In regard to the seat of the disease, we will observe that although it is so commonly met with in the orbit, it rarely attacks the forehead, or other parts of the cranium. In a singular case, described by Cruvelhier, and quoted by Dr. Walshe, in his work on Cancer, the frontal, ethmoid, nasal, and inferior turbinated bones, the body and wings of the sphenoid bone, the pituitary membrane, and part of the dura mater were implicated. In Chelius's Surgery, also, cases are given which would seem to show that this disease may originate between the pericranium and skull. In the following case, so far as can be made out from the history, the disease began in the tubercle, and no doubt has secondarily involved the subjacent structures.

Joseph H——, aged twenty-eight years, admitted on the 12th March, with a large fungoid cancerous growth springing from the entire frontal bone. It was fully ten inches in diameter, very prominent, and extended over the face to nearly the tip of the nose, implicating the skin almost to the point; the eyelids were also involved, and all the integuments of the upper part of the face, which was so covered with the tumour that the patient was completely blinded, although the eyes were not affected. It appears that, twelve months ago, a small pimple, which first appeared on the forehead four years before, was wounded by a chisel; it then began to ulcerate and grow, and rapidly increased until it spread over the whole forehead and upper part of the face, frequently bleeding, and presenting the well-known external characters of fungus hæmatodes, being mostly of a deep purplish red or crimson colour. It was treated several times by a homœopathic practitioner, who applied nitric acid, then Fell's paste several times, after which some bone came away. It, however, invariably grew again after each application; and as the poor man was a very great sufferer, he sought admission into this hospital, but too late to expect more than the merest palliative treatment. He was so reduced, from frequent loss of blood, that any attempt at removal would have been followed by a fatal re-result. Two or three times Dr. Marsden applied a paste, consisting of equal parts of chloride of zinc and flour, over the surface of the tumour, which had the effect not only of preventing its further growth, but of destroying portions of its structure most effectually. The dead part of the tumour was removed with the dressing forceps, and the paste reapplied. No pain was experienced from this treatment; but it afforded relief for a short time only. The odour from the fungous bleeding mass was at times most horribly offensive, as is frequently the case in similar instances. Before the use of this paste of the chloride of zinc, a solution consisting of ten grains of the salt to an ounce of water was used on admission. Although its growth continues, the patient's health is remarkable under such distressing circumstances.

May 12th.—The tumour is creeping down the side of the face. The patient is wasting rapidly, and will soon succumb to the disease.

ST. PANCRAS ROYAL DISPENSARY.

Fall across a chair by an eight-months pregnant woman, with laceration of the Genitals and escape of the Liquor Amnii; Regeneration of this Fluid, and delivery beyond the full time.

(Under the care of Dr. Gibb.)

During the pregnant state how often do we see serious injuries sustained, which do not prevent the female from going on to her full period and ultimately lying in, without bad results either to herself or her offspring! If the nature of the injury be such as to produce a sudden rupture of the membranes and escape of the amnial fluid, as occurred in the following case, some anxiety is felt lest the result should be premature labour. Most generally it does ensue, and yet the instance which we briefly narrate cannot by any means be a solitary example in which the whole or greater part of this fluid has escaped without the induction of labour. The prominence of the abdomen greatly diminished; it was quite soft and flaccid, and in the course of a few days it began to get prominent again, until, by the secretion of fresh fluid from the amnion, it had assumed its natural size and form; and when, we may say, the tenth month was completed, labour set in with no unusual result.

Mrs. T——, aged thirty-three, a small spare woman, the mother of four children, and just eight months gone with her fifth child, was standing upon a chair, in the afternoon of the 7th of January, and was lifting her right foot on to the sill of the window to hang up something, when the chair slipped, and she fell straddleways across the back of the chair, and then, with the chair, fell heavily on to the ground upon her side. Simultaneously with the accident there gushed about a pailful (as she describes it) of blood, but which proved to be the liquor amnii and blood, which continued to flow for a little while and then diminished, a little discharge of blood, however, still continuing. She was severely hurt in the external parts, which were found to be lacerated on Dr. Gibb's seeing her, about two hours afterwards. The part injured was the upper portion of the left nympha, which was torn across, and was very sore and tender. A pencil-shaped clot of blood protruded from the urethra, but about an hour before she passed her urine naturally and without difficulty. The vagina was uninjured, and so was the uterus, so far as could be ascertained. The abdomen was quite soft and flaccid over the uterus; its prominence had greatly diminished from the loss of fluid, but the motions of the child were distinctly felt. She had suffered some slight collapse, and was very cold; reaction, however, set in, and the pulse became moderately full, soft, and 88 in number. She expressed some uneasiness about her children. The bleeding had ceased, and she now lay quiet and tranquil. An anodyne draught was ordered of laudanum and camphor mixture.

Jan. 8th.—She passed a good night, with occasional bleeding from the wound. To-day she is free from pain; her abdomen is quite soft; no labour pains.

She went on well without a bad symptom, and attended to her household affairs. The abdomen slowly filled after a few days. Her bowels were relieved once only by a dose of castor oil, and the wound perfectly healed up.

Feb. 5th.—She has gone on quite well without any bad symptom; the uterus has become filled again by regeneration of the liquor amnii, and the motions of the child are quite strong. The abdomen is now much larger than before the accident, and her health is good.

March 28th.—Labour set in at nine o'clock this morning, and birth was given to a female child at the same hour on the next day. The membranes ruptured six hours after the commencement of labour, when a very large quantity of liquor amnii escaped, followed afterwards by a good deal of hæmorrhage. The head was high up, and the presentation that of the hand across the head. The labour was somewhat tedious, but delivery was satisfactorily accomplished, with the hand at the side of the head.

She had no untoward symptoms after delivery, and got up on the tenth day. The patient states that she has had a better time of it than with any of her previous children, and that the labour was quicker. Both mother and child are now (May 15th) quite well.

We may remark that, according to the period of delivery, as stated above, which took place two months and a half after the accident, some doubts might be felt as to whether she was actually eight months gone at the time of its occurrence. This, however, she states to be the case, and, on careful inquiry, there seems no reason to doubt the truth of it.

It is quite possible that the period of utero-gestation was prolonged, from the very fact of the loss of the liquor amnii, the complete repose thus given enabling the uterine contents to assume their normal condition.

NORTH LONDON OPHTHALMIC INFIRMARY.

Vegetable Astringents as Collyria.

(Cases under the care of Mr. Ernest Hart.)

The therapeutical indications of the slighter forms of ophthalmic disease would appear to be simple enough, and the local treatment has been laid down with authoritative precision by some of the elder writers upon the subject. Yet we find that the more advancing ophthalmic surgeons are not disposed to accept these canons as ultimate laws, but are led by additional investigation to add some clauses of amendment. Mr. Ernest Hart adopts at this institution two general laws which guide him in the choice of local applications: 1. That all kinds of collyrium are objectionable which have any sediment. 2. That vegetable solutions are to be preferred to mineral. The first rule has a double application; it excludes many of those forms of lead and zinc collyria which have been objected to with justice by reason of their tendency to permanent deposition upon an ulcerated surface; and it fixes the mind upon the inconvenience of mechanical irritation, such as is likely to be set up by the employment of an eye-wash which leaves a sedimentary deposit upon the palpebral or ocular conjunctiva, and thus becomes a source of considerable discomfort—at least, Mr. Hart considers this to be a rule of much importance in the topical medication of the eye. The preference for vegetable astringents is founded upon practical observation of their superior success in many cases. He employs frequently a collyrium of tannic acid with glycerine: the strength may be greatly varied, and the effects will be proportionately different. A strong solution is very effective in the treatment of granular lids. In cases of asthenopia and other forms of debilitated vision, Mr. Hart uses with advantage a solution of green tea, with which he directs the patient to bathe the eye frequently. On the whole, we are inclined to believe that this practice is deserving of a fair trial; and the systematic and intelligent substitution of vegetable extracts and solutions, in the majority of cases treated, appears to be an improvement in the treatment of ophthalmic disease. Of course we do not mean that they are to be exclusively employed, and that the mineral elements are to be discarded,—this is not the practice adopted here,—but that weight should be given to the considerations mentioned, and that the reasons quoted should have an influence on treatment.

Clinical Records.

FISTULOUS OPENING BETWEEN THE INTESTINES (PROBABLY CAPUT COLI) AND PARIETES.

This is a case of some interest, at present in University College Hospital, under the care of Dr. Hare and Mr. Erichsen. The patient, Mrs. B——, aged thirty-two, when about sixteen years old, was severely kicked by a horse, the hoof striking her at the lower part of the right side of the abdomen, towards the inner side of the anterior superior spinous process. From that time she continued for many years to suffer pain at the seat of the accident, never being free from it for more than a few weeks together. When the pain was present, she could often feel at the spot an oblong swelling; but this subsided at the periods when the pain diminished. In 1854, the skin over the painful part became discoloured, and subsequently two or three small openings formed, from which some thick whitish matter discharged. Afterwards, above the former one, another swelling formed, and from this a discharge of a yellowish colour subsequently occurred, and small seeds, minute portions of potatoe, &c., were passed. A communication evidently now existed between the intestines and the external surface of the abdomen. The discharge continuing, she was admitted into one of the metropolitan hospitals in February, 1856; but little was done except applying poultices to the parts. She was re-admitted into the same hospital in September of that year, and remained there for six months; in which period two operations were performed, the second one being the application of the actual cautery; but neither of them effected the complete closure of the opening. The patient came under the care of Dr. Hare, at University College Hospital, in April, 1857; and by a course of steel, cod-liver oil, and other remedies, her general health very much improved. By degrees, also, the slight discharge (which was almost always fæcal) became still less; but as it was not likely that the fistulous opening would entirely close spontaneously, and as the discharge gave rise to some erythema of the surrounding parts, he persuaded her to submit to another operation for the radical cure of the affection. The patient, therefore, came under the care of Mr. Erichsen, and the operation was performed on the 14th ultimo. This consisted of carefully paring the edges of the fistula and bringing them well together; but whether success will result on the present occasion is very doubtful, as there is still a disposition in the fistulous track to remain open.

THE TREATMENT OF NÆVUS BY INJECTIONS WITH TANNIC ACID.

Our readers may remember a notice in the reports of the Royal Medico-Chirurgical Society, of a communication by Mr. Haynes Walton on the successful treatment of a vascular tumour in the orbit by a solution of tannic acid. We understand that several surgeons have been adopting the method there advocated for the removal of nævi, and with the best results. Mr. Walton has himself used it in several such cases to his complete satisfaction. We record an instance that came under our notice in his practice at St. Mary's Hospital. A sub-cutaneous nævus was observed at the root of the nose in an infant eight months old. It was treated with iodine paint and cold lotions without benefit, and the increase induced the parents to send the child to a London Hospital. There was now, five months later, a tumour as large as a marble, soft, capable of being much reduced by pressure, and covered by perfectly healthy skin. Mr. Walton first applied a ligature subcutaneously, but unsuccessfully; indeed this seemed rather to hasten growth. Then he resolved to inject with tannic acid. An aperture was made at the base of the tumour with a narrow tendon knife, which was moved about with a view of breaking down some of the texture, in order that the injection might have sufficient contact with the blood, and produce that peculiar coagulation which this agent is capable of effecting. The nozzle of a small syringe filled with a solution of the salt, in the proportion of a drachm to an ounce of water, was passed into the wound, and the fluid quietly thrown in till the nævus was well distended. Mr. Walton laid much stress on the gentleness of injecting, and the propriety of ceasing directly that the tension of the tumour was apparent, lest extravasation should happen. The hardness that quickly ensued proved the rapidity of the coagulation.

The special advantages of the plan are its potency and safety. The action of the tannic acid on the blood is certain, a peculiar coagulation being at once produced. There is no risk of sloughing, an occurrence that is apt to ensue when the muriated tincture of iron is used, and when it is due to the free acid it contains. The child attended at the hospital for a week, and then left for the country, there not being yet any apparent alteration. It was seen at the end of three weeks, and a very considerable reduction was manifest, and to the touch there was a sensation of lumps beneath the skin. Mr. Walton saw the child for the last time just six weeks after the operation, when there was no appearance of a tumour, and except that the integuments at the spot were a little hard, there was no trace of the former disease. No one, he says, would have told by mere ocular inspection that a nævus had existed.

NEUROMATOID TUMOUR.

Tumours growing along the course of nerves, which seem as it were a part of the nerve itself, often give rise to symptoms which would lead the surgeon to believe that a true neuroma was present. A case of this kind was recently in King's College Hospital, in the person of an elderly woman, who, eleven years ago, first observed a small tumour growing in the upper and inner part of her left arm: this gradually enlarged and caused considerable pain, which increased to such an extent as to deprive her of the use of her arm, forearm and hand. Mr. Fergusson first saw it about the 10th of April, and he believed it to be a rare example of neuroma. Most of the examples seen by Mr. Fergusson occurred in the popliteal space, on the posterior tibial or fibular nerve, most commonly on the former, and he believed it rare to see them in the upper extremity. Of course he refers solely to large tumours or nerves, and not to the subcutaneous painful tubercles which are met with in various situations.

Mr. Fergusson concluded that it was a neuromatous tumour, developed in the nerve—that is to say, the nerve was spread over it. It was removed on the 17th of April, and presented a smooth, even surface, and was of the size and shape of a turkey's egg. It had a distinct capsule round it, which was separated without difficulty. The dissection was performed with great care, as the median nerve was spread over its posterior surface to the extent of upwards of an inch in width. Before doing this, however, a large nerve was seen above and below the tumour, the deeper part of the latter being next the humerus. The divisions of this nerve were dissected one from the other, the greater part of it being left behind; possibly a few fibrils were removed with the tumour. A section was made of the growth, and it looked very malignant, with dark patches here and there, but in general characters it seemed to be a fibro-gelatinous growth. It had none of the fibrinous characters met with in neuroma.

The wound has nearly healed, and all painful symptoms have entirely disappeared.

SEVERE BURN.

A LITTLE girl, five years of age, was admitted into the Royal Free Hospital, under the care of Mr. Thomas Wakley, on the 16th of March, immediately after the accident of her clothes catching fire, and most severely burning the face and neck, the front of the chest, and the anterior surfaces of both arms; all the hair of the head was burnt off, as well as the eyebrows and eyelashes. Cotton wadding was carefully applied by Mr. O'Loughlin, the house-surgeon, and kept up constantly; and when we saw the child on the 12th of April, she was going on very well, as the covering of the face was removed, and the burns generally were healing up from the use of zinc ointment. She had an attack of pneumonia three days after the accident, but that disappeared under the use of four ounces of wine daily, and supporting the strength to the utmost by good diet.

The severe pain of burns, which often continues for some time after the accident, is said to be instantly relieved by a plan of treatment which, as far as we are aware, is not known in this country. It is that employed by Dr. Samuel B. Fisk, of Massachusetts, and consists in the application of a thick mucilage of gum acacia over the recent burn, and then dusting this well with the dry powder. The pain immediately ceases, relief is obtained, and in about ten days the burn is healed. This is worthy of a trial in our hospitals.

MOST EXTENSIVE VARIX.

WHEN attending one of Mr. Porter's Lectures on Surgery, delivered at the Royal College of Surgeons in Ireland, we saw a drawing which he exhibited of a man's leg and thigh affected with varix, in which the dilated veins were represented like coils of ropes, of nearly an inch in diameter. We were especially reminded of this drawing on seeing an elderly woman brought into the operating theatre of University College Hospital on the 28th of April, the veins of whose left leg, but especially at the lower part of the thigh, were dilated to the size of small ropes. This was treated in the usual manner adopted by Mr. Erichsen, of applying pins under the veins, being careful not to puncture them, and then sutures over the pins. Six were applied on the right leg and thigh at its inner side, and three on the left leg, the varicose veins of which extended to the dorsum of the foot. The success of this plan of treating varicose veins may be judged of by the number of cases coming for treatment at this hospital, all of which are radically cured without the occurrence of even an unfavourable symptom. During the past two or three years we have seen upwards of seventy cases so treated. In the majority, Mr. Erichsen has divided the obliterated vein subcutaneously between the pins, some six or seven days after the operation—a proceeding first recommended by Mr. Henry Lee, of King's College Hospital; but it is found that obliteration is complete without necessarily resorting to this latter proceedure. The patient, whose case we briefly speak of to-day, has become completely relieved by the operation.

LITHOTRITY IN A CHILD AGED FOUR YEARS.

IT is not often, indeed, that we see lithotrity performed in very young children in this country, and this is mainly due to the fact, that the urethra is small before puberty, and will hardly admit of the passage of either the lithotrite or of the fragments of stone to pass after it has been crushed in the bladder. M. Guersant, at the Hôpital des Enfans Malades in Paris, is constantly in the habit of resorting to this method of getting rid of stone in children. We have seen him employ it on little boys as young as five and seven years of age. In a lecture which we heard him deliver as long ago as December, 1848, on Lithotomy and Lithotrity, he stated that he had performed the first 42 times in boys, and had lost 8, 4 from the consequences of the operation, and 4 from scarlatina, measles, &c. Of the second, 21 patients were submitted to it, 18 of them boys, and 3 of them had to be afterwards relieved by lithotomy. There were 10 cures and 5 deaths.

The mortality, therefore, at that time, was greater from lithotrity in children. In some of the cases which we had actually seen, lithotrity was performed nine times. We do not know what the statistics of his operation for stone may be during the last ten years, but they would prove of value in estimating which is the most proper operation in children. Lithotomy is the form generally employed in children by most of our hospital surgeons.

On the 6th instant, we saw Mr. Curling at the London Hospital perform lithotrity on a child of four years of age, certainly the youngest we have seen submitted to this method of getting rid of stone. He used a small lithotrite, just brought from Paris by Mr. Harkness, demonstrator of anatomy in the London Hospital Medical School, such as is in common use amongst the French surgeons, which was introduced without difficulty, the stone being readily caught and crushed two or three times. He has crushed on a previous occasion the stone in the bladder of a boy of ten years of age with success. We have much doubt, however, whether the preference will ever be given to lithotrity in children, for the reason, that the other operation, in our London Hospitals at least, is invariably successful.

REPAIRS OF STUMPS AND FRACTURES.

At Guy's Hospital on the 4th of May a stout healthy man was brought into the theatre, having fractured the lower part of his fibula, with a dislocation of his tibia inwards, about a year ago. Probably at the time of the accident the sole of the foot turned outwards, with its inner edge downwards. This fracture and dislocation were attended to in the usual way, but was followed by an unusual projection of the tibia inwards, which was not only unsightly, but very awkward for the patient. Mr. Cock on this occasion cut down upon the projection, and removed all that was necessary by means of a mallet and chisel, under chloroform, and we learn that since this proceeding he has gone on well.

Three years ago a healthy-looking girl had her thigh amputated in the University College Hospital for osseous anchylosis of the knee-joint, existing since she was a year old. The stump was good at the time; although the end of the bone is well covered by integument, it is somewhat in the way of an artificial leg, and from disuse the stump generally has become wasted and atrophied. This was remedied on the 12th of May by making an incision in the line of the old cicatrix, when Mr. Erichsen removed with a butcher's saw nearly an inch of what may be called a pencil of bone, which no doubt had not had sufficient capacity to act as a resisting body. This has perfectly healed. We now and then see the end of the bone removed in cases of conical stump, but this was not one of that kind.

SUBCUTANEOUS NÆVUS OVER THE ANTERIOR FONTANELLE.

We saw Mr. Erichsen treat a congenital nævus over the anterior fontanelle of an infant twin, a fews weeks old, at University College Hospital on the 28th April, in the following manner: A puncture was made through the scalp on one side of the nævus, and a blunt needle-eyed probe armed with a ligature was passed through the base of the nævus to the opposite side, which emerged through another opening made with a knife. This was repeated at right angles to the first thread, and the four double cords were firmly tied, through fissures made in the skin, around the tumour, and complete strangulation effected. No cerebral symptom was manifested during the process. In such cases as these Mr. Erichsen does not use the needles in the usual way, because the membranes of the brain might be punctured, and death might ensue. But when performed in the manner described, there is not the same risk, and in about half a dozen cases thus treated by him no accident or untoward symptom occurred, and the nævus was got rid of. When a nævus is situated over a bone, of course the sharp needles may be employed, as is commonly witnessed.

All the numerous and varied methods employed for the removal of nævi are considered at length in most surgical works, but scarcely one refers to a nævus over the anterior fontanelle, which common prudence would teach us requires to be managed differently from nævi in ordinary and less important situations.

DISLOCATED ELBOW AND THUMB FROM A FALL.

A young man, aged twenty-three, while driving a cart, was thrown out of it, and fell on his hands and feet. The result was a dislocation backwards of both bones of the left elbow, and a compound dislocation of the head of the first phalanx of the thumb of the right hand, which protruded through the skin. He was taken to Guy's Hospital, and admitted under Mr. Birkett's care, who reduced the dislocation of the elbow first, and then sawed off the head of the protruding bone of the thumb and closed the wound. This united rapidly by adhesion; and three weeks after the accident he was perfectly well in every way, with a useful hand and arm.

The practice adopted in this instance, in treating the compound dislocation of the first phalanx of the thumb on the metacarpal bone, is that generally recommended,—namely, to saw off the head of the phalanx before reduction; and it is a proceeding which answers admirably. So far as we could judge, the man would have a good movable thumb, with all its powers of flexion and tension.

CARBUNCLE FOLLOWING A BLISTER, AND BECOMING PHAGEDÆNIC.

There is an elderly female at the present time in St. George's Hospital, under the care of Mr. H. C. Johnson, with disease of the right hip-joint. She was blistered over the hip in the latter part of March last; this was followed, a week afterwards, by some irritation of the cutaneous surface, and a carbuncle appeared in the site of the blister. This was opened a few weeks back, and exit given to matter and cellular tissue. The carbuncle was healing, when it was attacked with phagedæna of rather an obstinate character. The application of the tincture of benzoin failed, but the strong nitric acid had the effect of checking it, and the ulceration had nearly healed. Her general health appears to be pretty good.

Now what was the cause of the carbuncle in the first instance? Was it the blister? we should say not; but as there was most probably a vitiated state of the blood and the secretions, the blister was an accidental means for its explosion through the formation of a carbuncle. This patient's system, too, was below par, which accounts for the presence of the phagedæna.

EXCERPTA MINORA.

Enchondromatous Growths.—We have repeatedly noticed individual instances of enchondroma in various situations, and have dwelt upon their intimate structure. From the number submitted to our view, we would express the opinion that they are very frequent in the young, their consistence varying in the ratio of the age of the patient, being more osseous at their bases in the elderly than in the young, and thus partaking of the character of exostoses. Mr. Cock removed a small enchondroma from the left side of the chin of a little boy, at Guy's Hospital, on the 26th of January, which was almost pure cartilage, with a spicula of bone running up from its base; it arose direct from the jaw itself.

Obstinate Hydrocele.—On the 25th of February, we saw Mr. Pollack tap an old hydrocele in a man at St. George's hospital, who has had it tapped before elsewhere at least twenty times, and injected too, without a radical cure. On the present occasion, about twelve ounces of a transparent, greenish fluid were withdrawn, resembling rancid oil, and a solution of sulphate of zinc (two grains to the ounce) was injected, and retained for a few minutes, when the man experienced some smart pain; it was then withdrawn. He left the hospital a few days after, without any return of the dropsy, and we hope a radical cure may be effected. Of the multitude of substances employed to cure hydroceles, most assuredly the sulphate of zinc is one of the best.

Depuytren's Exostosis of the great Toe.—This rare affection was lately seen in the surgical wards of Guy's Hospital, under Mr. Birket's care, in the person of a young man the subject of it for two or three years, situated to the outer side of the nail of the right great toe, and partly encroaching upon the nail. It was soft and cartilaginous on the surface, and was removed by cutting its base with a scalpel. The base consisted of true bone, spreading out into the cartilaginous exterior, and no doubt in the course of further time would have become quite solid. No chloroform was used.

Necrosis of the whole Shaft of the Tibia.—There is a little boy just now in the London Hospital, eight years of age, who had his right leg crushed, which so injured it as to set up inflammation, and to produce necrosis of the whole of the shaft of the tibia. Its centre was recently cut across by Mr. Curling, who removed the two ends from above and below the central wound. He is doing well.

Medical Annotations.

"Ne quid nimis."

PERILS OF HYDROPATHY.

There are few more dangerous men in society than he who prides himself upon his sound common sense. Every one has met this man, and knows his characteristics well. He has no book-learning, and is inclined to be thankful that he has not: he is none of your recondite bookworms, full of cranks and nonsense,—he is a thoroughly common sense man. And so, without any special knowledge upon any subject, he thinks himself qualified to decide upon all. He makes his own will in a plain and straightforward way, which involves his heirs in an endless chancery suit. He does everything in his own private and sensible fashion, and being always "open to conviction," ten to one but he falls a victim to the first plausible quack whom he meets. He eschews the mysteries of medicine, and laughs at the carefully wrought theories of the treatment of disease. He trusts to the light of common sense, and adventures by its aid to grope obscurely amongst the complicated ropes and pulleys by which man's frame is guided, and to tamper with the delicate machinery, with about as much success as an ignorant land-lubber might have in adventuring to handle a ship's ropes in a storm, reefing when he should furl, and hoisting sail when he should scud with bare poles. Common-sense men delight in acting as their own physician: and this to be sure they have a right to do; and, if they choose, to poison themselves with lobelia, salivate themselves with "vegetable" mercury, or line their intestines with antiseptic charcoal. We should be very little inclined to dispute this, their undoubted privilege. But they are commonly unwilling to confine the benefits of their common sense to their own proper person, and, in their anxiety to extend them to other less sensible fellows, they bring themselves within the range of sharp criticism. It is thus that we find ourselves called upon to concur in a vigorous rebuke inflicted by an inquest jury at Woolwich, upon a Mr. Clark, a dissenting minister. This gentleman, considering hydropathy to be based upon reasonable principles, and to be a more "sensible system" of medication than that recommended by the great men who have devoted their lives to the study of medicine, proceeded to apply his principles to the friendly treatment of an unfortunate man, afflicted with pneumonia, pleurisy, and pericarditis. He immersed his victim in cold water, and swathed him in wet bandages, at the time that he was undergoing treatment by calomel. Gross deception was practised upon the qualified attendant. The patient sank rapidly, and Mr. Clark, finding things look badly for him, beat a hasty but untimely retreat. It was too late to save the patient —if at any time he could have been saved. The jury included in the blame Mr. Clark and the relatives: they greatly censured the blind assurance which could presume to meddle in a matter of life and death, the dangerous ignorance which could so mischievously blunder, and the unworthy deception which could counsel concealment from the attending surgeon. It is hard to say how many lives are snuffed out by sheer ignorance and stupidity. We chronicle but a tithe, and yet our gathering is abundant. Our sheaves overflow with fulness, and the sprouting crop of quackery almost defies the edge of the scythe.

A BATCH OF QUACKS.

If any man wished to particularize the most infamous acts of villany which can be perpetrated with impunity in this country, he would find them recorded amongst the deeds of that gang of quacks who, under the false pretence of superior medical skill and knowledge, hide the densest ignorance, the most reckless boldness, and the most murderous disregard for the health and life of their victims. Mendacity is the staff of their existence; the astonishing boldness of their lies is a matter of notoriety and wonder. One set of them preach up the virtues and innocence of a poisonous herb, which they protest is as harmless as water, and by dint of daily repetition of the falsehood, and spite of repeated exposure, gather together deluded creatures upon whom they occasionally commit manslaughter. Another gang of rascals prey upon the infirmities and the vices of enfeebled profligates and nervous students. They boldly protest that thousands are affected with foul and debilitating diseases, from which they are wholly free; they describe the most ordinary and the most trifling derangements, which they identify with the symptoms of a wasting, "secret" malady; and thus they cast their net around the healthy, whom they infect in body and mind. Not a day passes but we receive in our censorial capacity some mendacious handbill, some obscure advertisement, some foul pamphlet—the lure of a herb-doctor, a bone-setter, a venereal quack, or the like. Were we to notice all of even the more flagrant cases, or to respond to the majority of even the more urgent appeals, we should need no other subject for our pen. The evil grows apace, and we are obliged to class together a batch of misdemeanants. The most pressing complaints have reached us from several quarters of a filthy pamphlet, called "Human Frailty," which is addressed by post to married men, and, in their absence, falls into the hands of their wives. We have an urgent appeal from a lady into whose cab was thrown a quack pamphlet upon "Spermatorrhœa," by a "Dr." Watson—which we have once already condemned. Public decency cannot long be thus outraged with impunity, and if Lord Campbell's Act be inapplicable to such breaches of common propriety, it is to be hoped that the law may be armed with the necessary powers. A man has no more right to throw a filthy book into a lady's carriage than he would have to cart a dung-heap into her dining-room.

One painful feature of depravity is becoming more than ever prominent as this evil is developed. The testimony of Heaven is habitually called in to give additional force to the baseless vaunt, and a religious tone is given to the puff which increases its enormity. The religious feature is very prominent in Watson's prolusion, and equally so in the handbills of a "Surgeon and Bonesetter at Salford." This fellow sets forth that it is a common mistake for persons who have their knee or hip out of joint, to be treated for disease of the joint, and "he would say, if you cannot be cured by those under whose care you are—he will do so." His handbill is crowded with testimonials from people who "thank God" they were led to him. From a trial reported in the *Manchester Guardian* of April 29th, it appears that James Miller, a little boy with disease of the hip-joint, was "led to him" in February, 1857. He declared that the hip was out, and "proceeded to set the joint, as it was supposed, and used very great force in pulling and pressing the affected limb, the child lying afterwards quite exhausted, and crying piteously. Its legs were bound together, and its mother was desired to keep them so for ten days or a fortnight, without dressing or undressing, and to suspend a two-pound weight from the ankle of the leg which was affected, and to keep it hanging over the edge of the child's bed for some length of time." The child remained in his hands till September. An action for damages was brought and fell to the ground because, although the treatment appeared to the judge to have been "clumsy and ill-judged, to use no stronger expression," it could not be proved that the child's life was endangered. We hope that enough has been done to expose the nature of this fellow's practice. But the remedy lies with the public. The judge in this case laid down sound doctrine. He said, "Much must necessarily rest with the employer himself, who is bound to exercise ordinary caution and discrimination in the choice and selection of the party he employs. If he chooses to go to a quack instead of a duly-qualified practitioner, and is put to prolonged and unnecessary pain, if that be all, he has himself only to thank for it. But if a practitioner, whether he be quack or no quack, through gross ignorance or carelessness, or want of skill, inflicts some lasting injury upon his patient, he must pay for it." Turpia decipiunt cæcum vitia.

THE HABITATIONS OF SCIENCE.

Clearly, we have not yet determined, in this country, whether indeed the pursuit of science be a labour involving vast sacrifices of time, thought, and power, rarely bringing any material reward to the most devoted student, but fruitful in infinite good to the million, or whether it be a fruitless, base, and interested labour which has no claims upon the sympathy and support of the Government and the people. Otherwise it would not now be doubtful whether the use of certain unemployed rooms purchased with the public money should be placed at the disposal of some of the unchartered learned Societies of London, who are at present ill-lodged at their own cost. The Somerset-house rooms are, it appears, needed for Government purposes; but there are rooms in Burlington-house which might well be applied to their use. A deputation from the Linnæan, Epidemiological, Ethnological, Microscopical, and other Societies lately waited upon Lord John Manners on this subject. After the customary amount of polite fencing, he allowed himself to be drawn into a promise to see into the matter. It is not to be apprehended that he will find any very impenetrable barrier to his "mind's eye;" but this promise invariably implies little more than indefinite postponement; and therefore it may be well that these Societies should adopt a suggestion previously made, to appoint a standing committee for the purpose of looking after the seer, and, if necessary, of supplying occasionally the ophthalmic assistance that may be needed. It is something more than a mere question of the lodgment of one or two Societies which is opened by this application. It must never be forgotten that the members of these societies meet together for the most purely disinterested purposes, to confer upon questions of scientific import, and to aid in the growth of that great power of science which has placed our country so high in glory and in potency. This is an eminently public object, and their labours call for public recognition and fitting national acknowledgement. Not only in London, but throughout the kingdom, there are handsome buildings—town-halls, guild-halls, and what not—which are erected at the public expense. "Earth builds upon earth palaces of old," and devotes them not always to the noblest purposes. Most of these contain admirable rooms, which are closed half the year round. We desire to see a new principle affirmed. We aim at having a general rule recognised which would place them all at the disposal of the various local learned societies spread over England, when they would otherwise be unemployed. Science merits an occasional concession at the hands of the million, upon whom she showers her benefits unasked. This were a graceful and a fitting honour; a service of some magnitude rendered entirely without cost.

EPIDEMIC DIPHTHERITE.

It is characteristic of the highest class of minds that they do not lose the power of grasping the larger relations of their subject in wading through the crowd of details with which their preliminary steps are encumbered. Smaller minds wait always in the antechamber, and never reach the dais from which they are enabled to look round and trace all the bearings and influences of their labour, and to eliminate those higher facts which concern the interests of nations, and attract the attention of the world. We pay a well-deserved compliment to Dr. Farr in assigning him a place amongst these foremost men. His quarterly reports rise progressively in interest, and he analyses with eloquent philosophy the accumulating evidence so industriously collected. He publishes this quarter a very excellent *résumé* of the history of *diphthérite*, or, as we shall henceforth call it, "diphtheria," during the last three months. It has proved very fatal in Norfolk, Suffolk, Essex, Staffordshire, and elsewhere. Upwards of 400 cases of "putrid sore throat" have been attended at Bradwell, in Essex, by the registrar, and it was the cause of eight deaths out of twenty-one. There can be no doubt that this disease is, by many practitioners, very frequently confounded with scarlatinal sore-throat, with croup, or with quinsy. It is very desirable that the symptoms should be exactly defined, since prudence demands that a careful note should be made of the occurrence of every case of a disease which assumes the epidemic form: while conscience requires that no unnecessary alarm shall be excited, and that the virulence of the epidemic shall not be overstated. Here is Dr. Farr's view of its origin and importance: "Diphtheria, like Asiatic cholera, is probably only a more intense form of an old disease: but new intense forms of disease deserve close attention, for with the increasing density of population, the intimate connexion between England and every unhealthy climate of the world, and the slow progress of sanitary improvement, we cannot consider ourselves absolutely safe from an eruption of sanitary epidemics, which, like their predecessors, may open a new chapter not only of medical but of national history; for Niebuhr acutely remarks, 'that the great epochs of history are marked out by pestilences.'"

HORSE HEALING AND HORSE TAMING.

Apropos of the wonders of horse taming, Dr. Doran revives the marvels of horse healing. He recalls the feats of Sieur Tunnestrich, of the Hague, who professed to heal instantaneously horses dangerously wounded in the head. In January, 1772, in the presence of the statholder and other eminent persons, a large nail was driven into the head of a horse; it was then drawn out by pincers, when Sieur Tunnestrich went up to the animal, injected a fluid into the wound, and in five or six minutes the horse was as lively and well as if nothing unpleasant had happened to him! The mystery of horse taming begins to lose a part of the dim atmosphere of scientific marvel with which it was sought at first to invest it. The electro-biological influences which were insinuated to be potent agents in the work, are pretty generally discredited; and this is not to be regretted, since they serve for a time to strengthen the hands of mesmeric charlatanry. The American papers speak everywhere with confident boldness of the use of a strap to the foreleg, and the like mechanical means, as being the arcana of Mr. Rarey's secret; and similar practices are described in various quarters as being successfully employed. M. Baudelocque has added another to the drugs which have been recommended for the purpose. In a communication to the Academy of Sciences at Paris, on the Sedative Effects of Lobelia Inflata, he declares that lobelia longifolia is the potent agent by which Mr. Rarey triumphs. *Credat Judæus Apella.*

POISON SHOPS.

ANOTHER victim has been added to the list of those murdered by the careless sale of poisons. The circumstances are pronounced by the local paper to be "somewhat singular"! They are singular only in their unusual atrocity: in the more than ordinarily blind ignorance of the vendor, his criminal carelessness, and double-dyed stupidity: they are not singular in any other respect, but repeat in painful monotony the features of a dozen cases which have from time to time been recorded of manslaughter by unqualified vendors of poison. A Mr. Storry, according to his own statement, "took a shop at Guisborough on April 9th, which had in it a stock of groceries, draperies, and drugs. Drugs he was not thoroughly acquainted with, and objected to take the whole of them, but the person leaving pressed him to do so." It does not seem to have occurred to him that in selling over the counter deadly poisons of various kinds, with whose appearance and properties he was unacquainted, he incurred any species of responsibility; and he served them out in this "happy-go-lucky" fashion without any catastrophe occurring until Wednesday the 28th of April. On that day a servant-maid, named Fanny Wilkinson, aged twenty-six, who was suffering from diarrhœa, sent to his house for an ounce of powdered rhubarb to mix with other remedies. Mr. Storry supplied the girl with half an ounce—all he had—of powdered opium, supposing it to be rhubarb, although the bottle was labelled in Latin "Pulv. opii Turc opt.;" the fact being that, seeing the word "Turc," he supposed it to mean Turkish rhubarb. The girl remarked to him that the powder was of a very dark colour for rhubarb, which he admitted, apparently without it ever occurring to him that other things might be grown in Turkey besides rhubarb, and that he had better be sure that it was rhubarb before selling it as such. The unfortunate patient, although not without suspicions as to the dark colour, swallowed a teaspoonful, or about thirty grains of the powdered opium. Of course she died the same evening, with all the symptoms of narcotic poisoning. Some eight or ten grains of opium were filtered from the contents of her stomach. The ignorant and culpable vendor has been committed for trial on the charge of manslaughter. He confessed his crime, and awaits his punishment. The one will follow justly on the other. But we must look beyond his offence and its penalty. There is sore and instant need of a statute to prohibit this indiscriminate sale of poisons. We have constantly raised our voice in warning; we have pressed urgently for the immediate enactment of such a bill; and have called for aid upon all authorities, executive and legislative. Yet it is still in abeyance; and recently, when Lord Derby asked for an opinion upon this subject from a deputation from the London medical corporations, he was told that they had not considered the matter, and therefore could not offer any opinion. We say that they have neglected their plain duty. They are the official guardians of the interests of the profession and of its relations to the people: it was for them to play the part of the provident ruler who,

> "like a prophet,
> Looks in a glass that shows what future evils
> Are now, or by remisness new conceived,
> Are yet in progress to be hatched and born."

But they have slept over their duty, as is their custom; and the neglect to enforce the penalty for the careless sale of poisons has brought about the death of a large number of persons who by timely interference might have been saved.

> "Those many had not dared to do this evil
> If the first that did th' edict infringe
> Had answered for his crime."

THE LOOPHOLES OF THE LAW.

THE art of making webs is certainly one of the most difficult of human accomplishments. The subtlety of the captive commonly overpasses the cunning of the captor; and as rogues are more cunning than honest men, so the ingenuity of law-breakers defies the skill of law-makers. Who could have supposed that juggling Mr. Feist, with his body-changing and money-trapping tricks, should have found means to escape punishment after conviction? The loophole through which he has found egress from the prison walls, is bored thus: To send bodies for dissection against the will of the relatives is, indeed, a punishable offence, and this was virtually done. But in this case the relatives were defrauded of their will by a lie, and, therefore, never thought of refusing a permission which was not asked. They took it for granted that the body was not dissected, since it was screwed down in their presence, and never dreamed of prohibiting the dissection, because they would have looked upon it as impossible. The Chief Baron observed, in giving judgment upon the appeal, that "the prisoner had, possibly, prevented the relatives from taking steps and proceedings which to them rendered the requirement of burial unnecessary; but that as he had full possession of the body, he had only done that which the law authorized him to do." Thus it appears, that to send a body for dissection openly against the will of the relatives is a punishable act; but that by adding to this offence that of falsehood and fraud, an immunity may be secured. This is a somewhat more glaring inconsistency than any which we have been accustomed to notice in the administration of justice. The simple offence is a crime within the cognizance of the law; but under conditions of fraud, by which it is morally aggravated, it ceases to be legally punishable. This may be very satisfactory to the advocates, to whose ingenuity of argument it gives the widest scope; but we can but think it very prejudicial to the larger interests of justice.

> " We must not make a scarecrow of the law,
> Setting it up to scare the birds of prey,
> And let it keep one shape till custom make it
> Their perch and not their terror."

DISEASE AND DEATH IN THE FOOT-GUARDS.

A RETURN just issued, showing the mortality of the Foot-Guards and some of its causes, furnishes an impressive supplement to the evidence given before the Army Sanitary Commissioners, of which we furnished an Analysis,—since copied, without acknowledgment, by several of the French papers. This return shows that from 1839 to 1853 (both inclusive), 350 soldiers in the Grenadier Guards were killed and 214 invalided by consumption, out of 654 deaths from all causes; in the same period 12 men put an end to their lives by suicide. In the Coldstream Guards 150 died and 49 were invalided by consumption, out of 339 deaths in all; the number of suicides was six. In the Scots Fusilier Guards 155 were killed and 97 invalided by consumption, out of 340 deaths in all; in fifteen years only one case of self-destruction is recorded. This report fully bears out the statement we then made of the peculiar rapidity and violence with which tubercular disease undermines the health of the Foot-Guards; and, if it serve no other purpose, will yet have attained a useful end in recalling public attention to this important subject, and jogging the elbows of official indolence at a moment when there is some danger of renewed stagnation.

A MANCHESTER LURCHER.

VERILY, "lurching" is a good trade. Here is a veritable extract from the diary of a Manchester lurcher: Anglice—quack:

> "No. 71. Nov., Mary Stubbs, —— street; sickness, stetch in the sid; aged 48. Bisness, dressmaker. Fisik, 6 bottles of stuff and 2 boxes of pills, for wh. she ped me 23 shillings; mind to call next week & and mak her tak mor. No. 72. Peter Makormuck—an Irish odman, 7, —— street; sickness, a digg in the ribs, aged 46. Fisik, a bottle of lamp hoil, and 2 bottles of salts and water, colord pink; ped me 9 shillings and owes me the rest, 6 shillings. No. 73. Lisa Poli, a hold ladi, on her incum. Sicknes, dry lites, aged 72. Fisik, a quart bottle of my green mixture, and owes me a giny if she gets well."

This exquisite literary curiosity has a racy originality which sets the commentator at defiance. It is a leaf stolen from the Thief's confession. The villanous rascality of the proceedings related receives an appropriate finish from the language in which the calendar is couched. This precious document fully deserves to be embalmed in the annals of contemporary literature; it will serve to show to future times how many of this century are content sometimes to place the guardianship of their health in the hands of men who, like *Falstaff*, the illustrious chieftain of rogues, "leaving the fear of Heaven on the left hand, and hiding their honour in their necessity, are fain to shuffle, to hedge, and to *lurch*."

THE MUSIC OF THE HEART.

MANY a time have the sensitive chords of hearts attuned to sympathy vibrated beneath the touch of pity. Often have they made glad tempestuous music within the joyful breast. But all this belongs to the realms of poetry, and is discordant with the opinions of surgeons and anatomists. Lately, however, a melomaniac, a Swedish physician, by name Rhuders, has harmonized the gentle conceits of the poets with the dull records of the physiologists. He has noted down in the appropriate language of "crotchets and quavers" the beatings of the palpitating heart of a female in one of the hospitals of Upsal. The composition is said to resemble a somewhat irregular waltz à deux temps, and, as the chronicler gravely remarks, it constitutes one of the most pathological curiosities of the day. We say with *Olivia*—

> "Why, this is very midsummer madness."

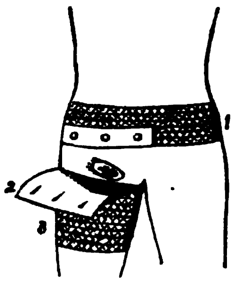
Music run mad is just now the favourite idolatry of young Germany; and although Dr. Rhuders' composition may not possess the charming melody of Weber's celebrated last waltz, it may very probably achieve at least an equal celebrity. We can imagine that it may initiate a new system of drawing-room pathology, and that fine ladies may in time call in a Wagner or a Brinley Richards to note down in chords the sounds of their beating hearts, and to enable them, swan-like, to fade in music.

New Inventions
IN AID OF THE
PRACTICE OF MEDICINE AND SURGERY.

THE ELASTIC APPARATUS FOR DRESSING OPEN BUBOES.

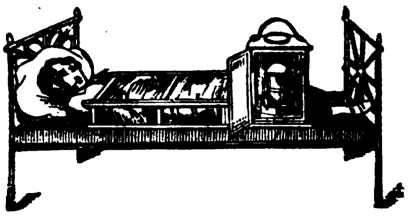
MR. BOURJEAURD has lately made, upon the plan and suggestion of Mr. de Méric, an elastic apparatus wherewith patients can, without the least trouble, dress their open buboes and walk about with ease. It is well known that a figure-of-eight bandage is very tedious to apply, especially by patients themselves. In order to save them this daily annoyance, Mr. Bourjeaurd has made an apparatus, represented in the accompanying woodcut, and which is composed as follows:—

To an elastic thigh-piece, on the spiral principle, is fixed a calico flap, lined with oiled silk; the flap is thrown back upon the thigh prior to dressing the open bubo, and when the compress is applied the flap is drawn up and buttoned to a belt which runs round the waist; the holes are so disposed that the flap exercises more or less compression on the inguinal wound.



NOEDL'S PATENT VAPOUR-BATH.

This portable Vapour-bath is at once both simple and effective, it maintains a uniform amount of vapour, and can be placed beneath the bedclothes, near the patient, with perfect safety. It is also applicable as a hot-air bath, if desired.



The above woodcut illustrates the application of the apparatus. In a perforated safe is contained the boiler and spirit-lamp, by means of which a powerful vapour-bath can be produced. By removing the boiler, and placing a cylinder in the safe in contact with the flame, it becomes also a hot-air bath. The invention will be of great service in many medical and surgical cases.

ABDOMINAL BELT.

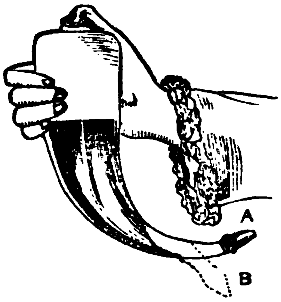
Mr. Huxley has submitted to us an abdominal belt, for use in cases of pregnancy and obesity. By a simple arrangement, the chief pressure is obtained at the lower part of the abdomen, so as to afford sufficient support without being liable to displacement. It is readily enlarged, and is especially adapted for the use of ladies previous to accouchement.

MR. RICHARDSON'S TOOTH PROTECTOR.

This invention consists of a metallic plate, convex externally, and internally lined with gutta percha or chemically prepared india-rubber, accurately moulded to the shape of the teeth; one plate being required for the upper, and another for the lower. The plate may be made of gold or platinum, or any metal proof against the action of acids. The apparatus is applied with facility and without pain, and can be readily constructed at a moderate cost.

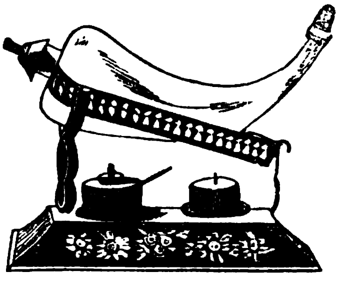
The deleterious effects of mineral acids on dental structures, and the discoloration arising from a continued course of steel medicines, have long been recognised even by the public, and medical practitioners have been induced to withhold the administration of such medicines in cases wherein their therapeutic value might otherwise render their employment highly desirable; the ordinary precautions—glass tubes, sal volatile, soda, &c.—being only imperfect palliatives of a very notorious evil. For although it is possible that a portion of the injury to the teeth resulting from the use of acids may be the consequence of absorption of these medicines into the system, it becomes the more important to avoid that destruction which results from the immediate contact of acids with the tooth surface, and which Mr. Richardson's simple and elegant invention prevents. It has elicited the approbation of many of our eminent physicians and surgeons.

EDWARDS'S FEEDING BOTTLES.



This newly-invented Feeder, in the cornucopian form, which for children requires only the simple artificial teat or india-rubber nipple, and the supply of food (without the possibility of the child imbibing a particle of air) is regulated by the thumb on the venthole or with Edwards's Air-spring stopper, as shown in the above illustration.

These Feeders are made to suit invalids for taking liquid food in a recumbent position, and for inhaling; also for administering medicines, thus avoiding smell and nausea, a great desideratum for adults as well as children.



A stand has been devised by the inventor, by which, with the aid of a small common lamp, or night light, the food is kept hot any number of hours.

This glass Feeder, with nipple, is most simple, and cleaned with the greatest facility by merely rinsing it out with water.

The Cornucopian Feeder, curved and marked A, is for children; B, for invalids.

Mr. Edwards's cornucopian vessel, made in steel, or other strong material, is intended for use in hospitals (especially lunatic asylums), for administering liquid food and medicines, and also for giving physic to horses, cattle, and other animals. It is also constructed with a long spout for the flow of oil, to be regulated by the venthole, for lubricating steam engines, machinery, &c. These useful inventions of Mr. Edwards are applicable to various purposes, and certainly deserve commendation.

BECKWITH'S ELASTIC WEAVING IN SHAPES.

In a former number of this journal we had occasion to speak favourably of this useful invention. It has been tested by the experience of upwards of two years; and our opinion of its merits has been fully justified. We have seen several articles manufactured under this patent used with great success. By an ingenious method of spiral weaving any required shape can be produced, and the amount of pressure regulated, at the will of the surgeon. These elastic appliances are woven without seam, and are well suited to meet the requirements of the profession.

Reviews and Notices of Books.

A Manual of Psychological Medicine; containing the History, Nosology, Description, Statistics, Diagnosis, Pathology, and Treatment of Insanity. With an Appendix of Cases. By JOHN CHARLES BUCKNILL, M.D. Lond., Medical Superintendent of the Devon County Lunatic Asylum, &c.; and by DANIEL TUKE, M.D., Visiting Medical Officer to the York Retreat, &c. London: John Churchill. pp. 562. 1858.

UPON most branches of medical science we have been well supplied with text-books; but as regards that branch which deals with insanity we have been somewhat deficient. Dr. Pritchard's treatise has been generally referred to. It is now out of print, and, moreover, was written twenty-five years ago. We have had excellent essays upon particular departments of psychological medicine; but no concise, systematic treatise upon it that could be used by the student and busy practitioner. Drs. Bucknill and Tuke have well supplied our deficiency, and their "Manual" must be regarded as one of the noteworthy publications of the day. As the authors remark, a knowledge of the nature and treatment of insanity is now expected of every well-educated medical man, the India Board requires it of all persons to whom medical appointments are given under their new system of competitive examination, and no doubt the desire to obtain a competent knowledge of so important a branch of medical practice will become far more general in the profession than it ever before has been. But

> "The authors are aware that no amount of reading can render it safe to dispense with clinical knowledge of mental disease. Their aim has been to supply a text-book which may serve as a guide in the acquisition of such knowledge sufficiently elementary to be adapted to the wants of the students, and sufficiently modern in its views and explicit in its teaching to suffice the demands of the practitioner."—p. iv.

The work is divided into ten chapters and an appendix. Chapter 1 contains an "Historical Sketch of Insanity amongst the Nations of Antiquity, mainly in regard to its extent." Chapter 2 is on the "Opinions of Ancient Medical Writers on the Treatment of the Insane." Chapter 3 deals with "Modern Civilization in its bearing upon Insanity," whilst chapter 4 treats of the "Amelioration of the condition of the Insane in Modern Times, especially in regard to Mechanical Restraint." Chapter 5 is allotted to the "Definition of Insanity and Classification;" chapter 6 to the "Various Forms of Mental Disease;" and chapter 7 is occupied by the "Statistics of Insanity." It has been Dr. Tuke's duty to treat of the above subjects. Dr. Bucknill makes his appearance in chapter 8, which is upon the "Diagnosis of Insanity." Chapter 9 follows with the "Pathology of the Disease," whilst chapter 10 "Discusses its Treatment." The Appendix is taken up by cases illustrating the portraits on the frontispiece. The latter contains "Types of Insanity," from photographs taken in the Devon County Lunatic Asylum. Following the first portion of the Appendix are cases bearing upon the "Treatment, Causation, and Pathology of Mental Affections."

The whole work is marked by completeness and ability of no common order; and we had a right to expect much from the authors, who are in their speciality men of mark. If we have in our perusal of their "Manual" felt disposed to be critical, it is with Dr. Bucknill when he touches upon abstract questions. These, we are of opinion, are not his *forte*. At p. 355 he takes the "opportunity to state with distinctness our views of the nature of pathological conditions not only in the brain, but in all the organs of the body." Now, in the argument which follows, two questions are, it appears to us, mixed up together. The first is, whether the starting point in most diseases not of a traumatic character, be a change of function—i. e. *force* or *power*, or a change in the textural quality of, or relative position in, the atoms of matter, and to which dynamic states succeed. The second question is, whether, assuming the *point de depart* to be truly of a dynamic origin, such change of function—i. e. or force of power is necessarily followed by "change in the atoms of matter." The latter being admitted in the affirmative, is, however, very different from saying that all disease is *primarily organic* in character. Dr Bucknill very truly observes:

> "Not a thrill of sensation can occur, not a flashing

thought or a passing feeling can take place without changes in the living organism; much less can diseased sensation, thought, or feeling occur without such hanges."—p. 356.

But let us ask, are the organic changes here alluded to, as also others implied in the discussion of the question, *consequents* or *antecedents* in time, to alteration in function—*i. e.*, of force or power? If the former, then they cannot be of *primary* character; and if "thrills of sensation," "flashing thoughts," &c., &c., are rather of dynamic than of static bearing, and constitute the *exodus* of pathologic metamorphoses, why then disease is primarily of *functional* character—*i. e.*, having its *point de depart* in some modification of force or power. Again, when alluding to the vesicular neurine, after saying (p. 351), "the little cells are the agents of all that is called mind, of all sensations, thoughts, and desires, and the growth and renovation of these cells are the most ultimate conditions of mind with which we are acquainted," Dr. Bucknill observes that there "*may* be more profound conditions," but they are beyond his ken, and that there is no better sanction for their existence than the "fantastic alliance of spurious physiology and Kantian metaphysics." Now, if we are not mistaken, Dr. Bucknill is twice laughing here, once at the notion that there can be any more ultimate conditions for mental manifestations than the activity of the vesicular neurine, again at the labours of the great intellect of Kant. Relative to the former opinion, we assert our belief that there *are* other conditions necessary; in regard to the latter, we acknowledge our deep respect.

The "Manual" will, no doubt, enjoy a very wide circulation, and this most deservedly. We strongly recommend its careful study, not only by the specialist, but by the profession generally.

In conclusion, we would just observe that if the subject of "treatment" had received a rather fuller consideration, at the expense, say, of the earlier historical illustrations, we think it would have better suited so practical a work. Out of 562 pages, only 68 are occupied by the "treatment of insanity."

The Dublin Quarterly Journal of Medical Science: containing Original Communications, Reviews, Abstracts, and Reports in Medicine, Surgery, and the Collateral Sciences. Part I. May, 1858. Dublin: M'Glashan and Gill.

This new number contains some interesting papers. We may refer in particular to the communication of Dr. Banks, "On a Peculiar Discolouration of the Skin in Females;" to that of Mr. O'Donovan "On the Treatment of Rheumatic Fever;" and to Dr. Osborne's essay "On the Plague of Athens as described by Thucydides." But we may say that the present part is more than an average good one.

Cyclus Organisch Verbundener, Lehrbücher Sämmtlicher Medicinischen Wissenschaften. Herausgegeben von Dr. C. A. Schauenberg. iii. band. Spiegelberg *Lehrbuch der Geburtshülfe*, mit 80 Holzschnitten. Lahr, 1858. pp. 376. Verlag von M. Schauenburg.

A Manual of Obstetric Medicine. By Dr. Otto Spiegelberg. Being vol. iii. of a Series of Text-books on the Collective Science of Medicine. Edited by Dr. C. H. Shauenberg.

Our friends in Germany are taking a hint from the success of our own chief medical publisher. His series of Manuals have, on the whole, succeeded so well as to prompt a similar undertaking to a publishing house at Lahr. The German series, however, will, it appears, labour under the same disadvantage that Virchow's "Handbuch" does—viz., that of being published in irregular parts. This is a great nuisance. The first portion of the Lahr series published is the first volume of the 26th number of the series, or the General Surgery; the second is the first division of the 9th number of the series, or the Text-book of Physiology; the third is the one before us—luckily, complete in this instance—the 30th of the series, or on Midwifery. The new text-books are intended to be essentially practical, in particular eschewing all superfluity of historical illustration, and verbosity of description, but giving the "pith and marrow" up to the latest period possible. That they will well answer their intention we have no doubt, judging from the example Dr. Spiegelberg has afforded us, and we think it not unlikely they will be largely patronized by that class for whom they are intended, namely, the medical students of Germany; but the *manner of their issue* we most decidedly deprecate.

Illustrations of the Constituents of Urine, Urinary Deposits, and Calculi. By Lionel S. Beale, M.B., F.R.S., Physician to King's College Hospital, &c. *With 37* Plates. London: Churchill.

Since our favourable notice of the First Part of this work, in September last, the two remaining Parts, completing it, have been issued, forming a volume containing 35 plates and nearly 200 figures of various deposits from the urine, the salts of the urine, and minute calculi. All have been carefully drawn from Nature, most of them by the author himself, presenting us with a series of beautiful and accurate representations of everything appertaining to the urine, even of the rarest kind, such as alloxanic acid, oxaluric acid and its compounds, uramile, allantoin, murexid, thionuric acid, &c. For convenience of reference, and as affording the readiest means of studying the urine microscopically and chemically, we know of no work to be compared to the present, and we recommend it to the student and the busy practitioner of medicine.

Practical Observations on the Local and Constitutional Effects of Syphilis and its Treatment. By Samuel Bayfield, M.R.C.S. London: Renshaw.

This little book is written in a popular style, and, although we cannot approve of some of the author's views, there are many which may be read with advantage. In the chapter on "Syphilophobia," the quackery connected with this subject has been justly denounced by Mr. Bayfield.

The Social Evil Practically Considered. By JAMES CHARLES WHITEHORNE, Esq., B.A., of the Middle Temple. London: Wertheim, Mackintosh, and Hunt. Pp. 32. 1858.

WE are not unmindful of the adage "*toujours perdrix*," and that we run the risk of its being repeated for our own benefit on referring again to the subject of "the social evil." But we willingly submit to this chance, in order to draw attention to a paper lately read at a meeting of the Lay and Clerical Union by Mr. Whitehorne. Of this evil, as the latter remarks, we all see one side of it: the clergy see one side, medical men see another, and the lawyers sometimes see another. We shall have to be guided in the future treatment of the great evil by weighing and considering *all sides* of it, however. In Mr. Whitehorne's pamphlet there is no one-sidedness, its *catholicity* is forcibly prominent. He shirks no aspect of the grievance, has no utopian views of treatment, and seizes at once a great, powerful, and even increasing source of the misfortune.

> "We know," says the writer, "that the lawful love of man for woman and woman for man is the best and holiest affection in our nature. .... We have forbidden this blessing to exist for ourselves and our fellows unless within certain stringent limits, yearly drawn closer, and enclosing a narrower field. Outside that field, its place is usurped, as was to be expected, by a ghastly and destructive phantom of it. We forbid a wife except to very few gentlemen, and to the very many gentlemen the harlot has taken her place. Thousands of legal and medical students and the junior members of both professions are living in sin more or less systematic. To a great extent, it is they and their fellows in other professions and trades who, I firmly believe, pay and keep going the harlotry that meets us in the streets of London, flaunting and defiant; and I believe that, dared they marry without losing caste, many (no one can even guess how many) would, and leave their sin. .... Our harlots exist in the numbers they do in London because young gentlemen and young ladies cannot and dare not marry without ceasing to be gentlemen and ladies, unless in the rare cases where one or both has means sufficient to maintain the same outward show as the respective parents."

Next to the appetites of hunger and thirst, necessary for the preservation of the individual, comes the sexual passion, imperative for the continuance of the species. Amongst the mass of men satisfied, it *must* and *will* be, somehow or other. We may talk of employing the mind and exerting the body, inculcate morality, temperance, and chastity, form "young men's societies," literary institutions, &c.; but to such as possess their manhood's virility, and glory in it, these things will not and cannot displace the natural cravings and consequences of the sexual instinct. And indeed, in multitudes of cases, the satisfactory employment of the mind and the power of continuous attention to any object are only efficiently to be brought about when this passion is, within proper limits, satisfied and subdued. To tell a vigorous unmarried man that he is continuously to be calm and unexcited, to read and to write, to talk and to think, so as to forget his almost indomitable instincts, is just so much "leather and prunella." He may be told to get married, it is true, and with propriety. But suppose he says he cannot afford to do it,—that society is in such a strange condition as to render it next to impossible to obtain or maintain a wife. To pooh-pooh him, and to talk about waiting—to shirk his view of the question—to advise him to avoid temptation, and then sin will avoid him, is simply to ignore the essential difficulty, and to leave him where he was, with his natural and unsatisfied inclinations. Every sensible and true man must, if he weighs the matter fully and without prejudice, come at last to the conclusion of Messrs. Whitehorne and Acton, which is simply this—viz., that unfortunately the theoretic position of female honour is confined to a comparatively small class of us, and that amongst hundreds and thousands of our people it is a name and nothing more—hardly that. Finally, that, as amongst our own class the impossibility of marrying, except late in life, becomes more and more urgent, the demand, and consequently the supply, of the material for the waste fires of strength and manhood are daily increasing. "This much is clear," says the former writer, "taking the unmarried women of London, between fifteen and fifty (a very large margin), roughly at half a million, it seems absolutely certain that, during one year, *one-sixth* of those unmarried are prostituting themselves for hire."

Statistical returns have just revealed the fact, that there are now in France 1,800,000 young females of a marriageable age who are yet to be provided with husbands.

Lamentable, truly. We wish some of our bench of bishops would tell us, when they are voting on army and navy questions, how, as the spiritual directors of the Government of a great country, they provide, in respect to soldiers and sailors, either for the lawful satisfaction of that impulsive tendency which arose at the command, "Go forth and multiply!" or for the soothing and taming, if not annihilation of it, supposing it be not necessarily imperative in its nature. We have not space further to point out the other aspects of the "Social Evil" discussed by Mr. Whitehorne, but we may generally recommend his essay as containing some fresh and startling views of the effects of the "prostitution" going on in this country.

Dysentery: its Pathology and Treatment. Clinical Lectures delivered at Jackson-street Hospital. By ROBERT CAMPBELL, A.M., M.D. Augusta, Ga., Jeremiah Morris, 1858.

THIS is a very forcible series of lectures, in which the author goes elaborately through all the various theories of pathology and principles of treatment with which the medical history of the disease is encumbered, merely to give greater weight to a general denegation of the value of the ordinary methods of treatment, and emphatically to affirm the worth of the following formula which is to be given in every case, whatever may *appear* to be the obstacle, and continued until the patient is quite well :—

"℞ Castor oil, two ounces.
Bicarbonate of soda, one ounce.
Spirits of turpentine, half an ounce.
Powdered gum arabic, one ounce.
Loaf sugar, one ounce.
Compound spirits of lavender, one ounce.
Camphor water, q. s.
To make eight ounces emulsion."

Sweet oil may be substituted for castor oil, and the proportion of turpentine varied. Since the object of the book is to introduce this formula, our duty is accomplished in quoting it.

The Illustrated Handbook of British Plants. By Alexander Irvine, F.R.S. London: Griffin.

Mr. Irvine is well known as an accomplished botanist and the editor of the *Phytologist*, a journal of botany. He is very deservedly an authority upon all botanical subjects; and whatever issues from his pen is sure to be deserving of attention for its accuracy, fulness, and thorough familiarity with the latest advances in botanical science. The work under review possesses these characteristic qualities, and it will meet the necessities of those who have not a botanical library on their shelves; while for the more erudite or the more wealthy, it will serve as a very convenient book of reference for the systematic, geographical, and structural relations of plants.

There is, however, one grave omission in this work, which is but too common in British treatises on botany. There is an entire want of appreciation of the grandeur and importance of the discoveries of Schleiden and his followers. The history of the vegetable cell is wholly neglected; and we do not even find the name of Schleiden in the long list of authorities quoted. This is a sad imperfection. That great discovery of the all-important functions of the vegetable cell opened a new era, not alone for physiological botany, but for the whole science of physiology. Schwann, following the steps of his master, applied his researches to the study of animal structure and animal function. And now, at last, the whole history of animal growth and animal function is nothing more than a recital of the story of the organic cell. It is the unit of all structure and the agent of all function. The conditions of cell-life are so much simpler and more easily observed in plants than in animals, that the study of the plant cell, which first unveiled this unsuspected secret of creation, continues day by day to throw additional light upon all kindred researches. We can but consider a work on botany as very incomplete which devotes but a few lines to this important subject, while it gives nearly a thousand pages to other departments of science.

Syllabus of Lectures on Medical Logic, delivered in Marischal College and University, Aberdeen. Printed by James Smith, Aberdeen.

Some time ago it was announced in our pages that a new chair had been instituted and endowed, on Medical Logic, in Marischal College, Aberdeen, by a worthy professional confrère—namely, Dr. Henderson, of Curzon-street, London, and to which Dr. Ogston was appoined the first Professor. Since then a syllabus of the lectures which that gentleman is about to deliver, has been issued for the use of students. According to the statement thus officially promulgated, Dr. Ogston's course will comprise twenty-eight lectures, and judging of the various matters he particularly, and at some length, proposes to discuss, the whole question will be thoroughly investigated. To specify the numerous points to which he intends to direct the attention of his hearers more especially, is impossible, within our limited space. Nevertheless, it may be briefly mentioned, having first alluded to the merits and defects of early medical science, its state before Bacon, and the neglect of that immortal author, the lecturer will then speak of the principles on which most sciences are classified, and show that the inductive and analytical systems are essentially the same in medicine as in physics. Afterwards, the ancient and modern methods, in reference to medico-scientific problems, will be contrasted. Subsequently, the new Professor intends dedicating one discourse to comparison and analogy in medicine; three to the numerical method; four to the deductive and synthetic mode of investigating medical questions; besides other lectures to observation, experiment, hypothesis, language, terminology, description, and classification. Next, fallacies in medicine, such as *à priori fallacies*, those of observation, generalization, ratiocination, confusion, and likewise that of irrelevant conclusion, will severally occupy five orations; and the series terminates by defending the utility of such studies, their inherent vitality, and intimate connexion with medical science. Finally, it will be advocated, that logic in medicine constitutes one form of applied science, possessing a close resemblance between it and political.

Should the learned Professor accomplish the varied task thus traced out by himself, in the way which his known erudition and extensive acquirements fully entitle the profession to anticipate, he will confer a great benefit upon those students who may be the auditors of such a course of lectures. And as the subject is somewhat novel, while very little has heretofore been written on medical logic, it is also to be hoped, when Dr. Ogston shall have terminated his important academic labours, that some report of the lectures may appear in an extended form, whereby practitioners generally may have an opportunity of studying at leisure a subject unquestionably of much interest both to learners and teachers, as those practically occupied in professional investigations.

The Effect of Septic Inhalations on the Lungs and General Health, in reference to a New Composition of Artificial Teeth. By Donaldson Mackenzie, Surgeon-Dentist. London: John Churchill.

When we say that this book is dedicated, without permission being announced, "to the Queen and the ladies of England, in the hope that the experience gained in the course of a long practice may be of benefit to generations yet unborn, into whose minds may truth and reason be instilled by the holy teachings of the mothers of men!" that a portrait of the Queen is prefixed; that we have been unable to discover any single point of novelty in its teachings; and that, by ordinary compression, it need not have occupied one-fourth of its present space,—we have told all that our readers care to know. We may say, in its favour, that it is exceedingly well printed, and that it is profusely illustrated by *ad-captandum* woodcuts, some of which are old friends.

I. *Nouvelles Recherches sur l'Importance des Fonctions des Capsules Surrénales.* Par M. Brown-Séquard. "Journal de la Physiologie." Janvier, 1858.
II. *Causes de Mort après l'Ablation du Nœud Vital.* Par M. Brown-Séquard. "Journal de la Physiologie," Avril, 1858.
Additional Inquiries on the Importance of the Functions of the Supra-renal Capsules. By M. Brown-Séquard. "Journal de la Physiologie," January, 1858.
The Causes of Death after the Removal of the Vital Knot. By M. Brown-Séquard. "Journal de la Physiologie," April. 1858.—Paris: Baillière.

II. We select as fair specimens of the papers contained in the *Journal de la Physiologie* the above-mentioned essays by the editor of this publication, and apologizing for the too cursory manner in which they are here of necessity treated, we refer the reader to the originals contained in the January and April numbers of the *Journal*—a work which will well repay the perusal of any one interested in the progress of physiology, which has only now reached its second number; and which cannot but succeed so long as it is supported by such men as Claude Bernard, Bence Jones, C. Robin, M. A. Sanson, and last, but by no means least, its able director, Dr. Brown-Séquard.

Dr. Addison, in publishing his work "On Diseases of the Supra-renal Capsules," irrespective of the boon he conferred upon medical science generally, furnished to experimental physiologists a comparatively new subject for investigation, and a fertile source of contrariety of opinion. Unable to determine the exact function of the supra-renal bodies, these gentlemen, agreeing to differ, have now ranged themselves in two principal groups—those who believe the functions of the supra-renal capsules essential to life, and those who altogether doubt their efficiency, except in the fœtus. Dr. Brown-Séquard may be considered the champion of the first class, and foremost amongst those who hold the latter opinion are M. Philipeaux and Dr. Harley.

The object of the present essay is to add to our knowledge of the functions of the supra-renal bodies, and to explain away some anomalies in the results of the experiments of Messrs. Philipeaux and Harley. In 1851,* Dr. Brown-Séquard first published some account respecting the nervous supply of the supra-renal capsules. Five years afterwards,† he announced that death, in all the animals he had experimented upon, followed the removal of one or both of these bodies. He also ascertained the poisonous nature of the blood of animals dying from this mutilation. Subsequently,‡ in the same year, this gentleman published a long account of his investigations. He stated, amongst other things, that loss of the supra-renal capsules is more quickly fatal than even loss of the kidneys, and ascertained that death in these cases does not take place from peritonitis, purulent absorption, nor any accidental complication, for death takes place too early to be attributed to these, or similar causes. The animals experimented upon suffered from general debility, with enfeeblement of the respiratory and cardiac functions, and died, for the most part, in convulsions, or with some symptom indicating disturbance of the nervous system. In their blood was discovered an undue amount of pigment. Soon after the publication of this paper, M. Philipeaux§ announced to the Academy of Sciences, in a paper on the subject, that he had in his possession four white rats, all of whom had survived the loss of the supra-renal capsules. He also asserted that when animals *did* die after the removal of these bodies, it was owing to peritonitis, or some accidental complication of the operation. Subsequently three of these animals died of cold, having lived nine, twenty-three, and thirty-four days respectively, from the time of the operation (the period of survival in Dr. Brown-Séquard's animals being generally expressed in hours).

About the same time Dr. Harley succeeded in removing both supra-renal capsules from some white rats, without any immediate injury to life. These animals lived for some time afterwards, and appeared to regain perfect health; two of them, however, subsequently died, the one fifteen days, and the other six weeks after the operation. As these animals were in perfect health up to the day on which they died, Dr. Harley attributed their deaths to some accidental cause.

Dr. Brown-Séquard acknowledges that these gentlemen have, by their experiments, established the fact, that death is not an inevitable consequence of removal of the supra-renal bodies; but he maintains that if both these organs be simultaneously removed, and no interval be allowed the animal to recover itself, death will follow in all cases. As to the death of M. Philipeaux's rats, our author objects that they could not have been killed by cold alone, and referring to the meteorological tables of Paris, shows that the cold on the days on which they died, was not sufficient to injure healthy animals. Our author has often observed that when both supra-renal capsules are removed, the one ten days or so before the other, the animal will survive for one or two months, but that eventually it becomes debilitated, and at last dies suddenly. He is thus led to think that the rats experimented upon by Dr. Harley came to their death by the effect produced by the removal of their supra-renal capsules, and not by any accidental cause.

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* Comptes Rendus de la Soc. de Biol., t. iii., 1851, p. 146.
† Comptes Rendus des Séances de l'Acad. des Sciences, 1856, p. 423.
‡ Ibid. p. 542.
§ Comptes Rendus de l'Acad. des Sciences, 1856, p. 904.

From his own extensive and valuable researches on this subject, Dr. Brown-Séquard draws the following conclusions:—

> " 1. That the functions of the supra-renal bodies seem to be essential to life in animals that are not albinoes.
>
> " 2. That the immediate and complete arrest of their functions quickly causes death.
>
> " 3. That the gradual suspension of their functions causes death at most after a few months, and in certain animals after a few days.
>
> " 4. That the simultaneous removal of both supra-renal capsules causes death generally more quickly than the removal of both kidneys.
>
> " 5. That if certain albinoes appear to be able to survive the removal of these bodies, the fact supports the opinion of Dr. Brown-Séquard, that one of the principal causes of death in animals which are not albinoes consists in the accumulation of pigment after the removal of these glands."

II. M. Flourens, in 1827, announced to the Academy of Sciences in Paris, that he had discovered a point in the medulla oblongata, the destruction of which led to instant death. This he named the " vital point," and considered it to be the centre of the respiratory movements. He placed it in the V-shaped portion of grey matter, just in front of the point of the calamus, on the floor of the fourth ventricle, and assigned to it a limit of three lines in length. Subsequently this gentleman, as the result of more extended observation, diminished the size of the vital point by two-thirds, and localized it at the very point of the V-shaped portion of grey matter. These conclusions were arrived at by making a series of transverse sections of the cerebro-spinal axis of living animals, from above downwards and from below upwards. When, in either case, the section passed through the point of grey matter in the beak of the calamus, life instantly ceased. In other animals, this point of grey matter alone was crushed, with as little injury as possible to the surrounding parts; in both cases the results were the same. " It is thus," says M. Flourens, " on a point not larger than a pin's head, that the life of the nervous system depends, the life of the individual—in a word, life itself."

To ascertain the truth of this assertion of M. Flourens, Dr. Brown-Séquard undertook a series of experiments, which consisted chiefly in the careful removal of the " vital point." The study of the phenomena which follow the removal of this spot, says the author, are extremely interesting. " Sometimes the animal falls immediately, like one thunderstruck; it ceases to breathe, and its heart scarcely beats, or, what is less frequent, it stops entirely. Often there is scarcely a trace of those convulsive movements which ordinarily accompany death." The effects of this operation on the heart's action must either be referred to the fact that this organ has its centre of action in the particular point of grey matter under consideration, or that the operation causes a shock to the medulla oblongata analogous to that of galvanism, which produces precisely the same effect upon the heart. The first supposition is rendered untenable by the continuance of the heart's action in an encephalous monster where the medulla oblongata is entirely absent, and by the fact that frogs may live for many months after the removal of this portion of the cerebro-spinal axis. Dr. Brown-Séquard asserts that the absence of the vital part alone does not necessarily stop or enfeeble the cardiac action, but that the irritation caused by the operation has much to do with it. In support of this he brings forward the following facts:—

1. He has ascertained that a simple pricking of the medulla oblongata is sufficient suddenly to diminish both the force and frequency of the heart's action.

2. If the pneumogastric nerves be first divided, as they were in ten animals operated on by Dr. Brown-Séquard, the removal of the vital point never suddenly stops or enfeebles the pulsations of the heart. " It seems, then, certain that one cause of sudden death in the removal of the vital point consists not in the absence of this portion of nervous matter, but in the irritation of the remaining portion of the medulla oblongata, and in the influence of this irritation on the heart's action."

That the arrest of the respiratory functions in these cases is a more frequent cause of *death*, the author acknowledges; and states what *is* doubtless true, that though respiration may cease and the heart's action continue for a time, yet the converse never takes place.

From the researches of M. C. Bernard, Dr. Brown-Séquard, and others, it has been ascertained that galvanism applied to the pneumogastric trunks, or their cranial extremities when these have been divided, at once arrests the respiratory movements; and the last-named gentleman has often observed respiration suddenly cease upon irritation of the medulla oblongata in the neighbourhood of the " vital point." Applying, then, the same argument to the suspension of this function as was used in the similar case of the cessation of the heart's action, the author concludes that the arrest of respiration in these cases is due to the irritation applied to the medulla oblongata, and and not to the absence of the " vital point." He has also ascertained that if this point be carefully removed without injury to the surrounding parts, " one rarely observes respiration arrested, and more rarely still the stoppage or enfeeblement of the heart's action." There appear to be yet other causes in operation which accelerate death in these cases, namely, the entrance of air into the veins, and the occurrence of pulmonary emphysema. In all Dr. Brown-Séquard's animals, where life was prolonged for more than an hour after the operation, this latter condition was found to exist; and in two cases bronchial mucus was found in the air-passages in sufficient quantity to cause death.

We find here recorded the histories of four animals, from whom the vital point had been removed; three were rabbits, and one was a dog. The immediate effect of the operation in all appeared to be an increase in the frequency and energy of the heart's action and respiratory movements, followed by convulsions more or less severe, with impairment of voluntary power, increasing difficulty of respiration, and death. In one this occurred thirty-three minutes from the time of the operation, another survived fifteen minutes, and a third lived for an hour and a half. In all these, pulmonary emphysema existed to a considerable extent; in the two first, air was found in the veins and right side of the heart; and in the second and third, the air passages were filled with tenacious mucus; in the third, there was as well a quantity of blood effused about the base of the brain and in the cavity of the fourth ventricle. From all these animals considerably more nervous substance had been removed than that indicated by Flourens as the "vital point," and more or less injury had been done to surrounding parts. In the last case given by Dr. Brown-Séquard, the animal appeared to feel its loss much less than the others. It took food, and was able to run about; eventually the respiration became difficult and noisy, the power of deglutition was lost, and it died in convulsion on the eighth day after the operation. On examination the mucous membrane of all the air-passages was found greatly congested, there was extreme emphysema, and lobular pulmonary apoplexy; the stomach and œsophagus were paralyzed, for they contained undigested food, which had been taken two or three days previously. The parts about the wound in the medulla oblongata had suppurated, and the fourth ventricle was full of blood and pus. Considerably more than the vital point had been removed.

From these and other observations, Dr. Brown-Séquard concludes—1st, that death does not always immediately follow the removal of the vital point; 2nd, that when death takes place suddenly, it is due in part to the sudden arrest of the heart's action; 3rd, that when either respiration or the heart's action is arrested, it is not owing to the removal of the vital point, but from irritation of the surrounding nervous substance; 4th, that the "*vital point*" of M. Flourens is not the focus of *vital force*, nor is it the nervous centre of the respiratory function; 5th, that the vital point does not *appear* to be essential to life.

The foregoing facts tend to weaken previously conceived ideas of the existence of a respiratory centre in the medulla oblongata, and they have led Dr. Brown-Séquard to his ingenious theory of the universality of the respiratory centre, if we may so term it—a theory which denies to any particular spot of nervous substance the exclusive and peculiar property of governing the respiratory functions, but which allots to each of the several parts of the cerebro-spinal axis a share, though not an equal one, in the management of the mechanism of respiration. This idea was treated of more fully in Dr. Brown-Séquard's Lectures, recently delivered in London; but it will be further elaborated, and indeed fully developed, in those which are about to be published in THE LANCET.

The Human Mind in its Relations with the Brain and Nervous System. By DANIEL NOBLE, M.D., Visiting Physician to the Clifton Hall Retreat, &c. London: Churchill.

THIS little work is of the class of "small books on great subjects." It deals with profound questions in a very lucid manner and suggestive spirit, and contains, in a compendious form, a digest of the most modern views on the physiology of the mind, together with certain original modifications peculiar to the author.

Dr. Noble furnishes the rare example of a man, who, after not only zealously espousing a specious and somewhile fashionable doctrine, but committing himself in print by publishing one of the most scientific works in its support, yet possesses sufficient freedom from bigotry to yield up his conviction to sound argument, and sufficient candour to publicly acknowledge that he does so. Having once himself been a believer in phrenology, his altered opinions on that doctrine are entitled to the more attention and respect.

> "As a system," says he, "phrenology would not appear to have received that confirmation, from extended investigation, anticipated in its earlier history by many able physiologists.... Coincidences in many cases are undoubtedly noticeable between form of the head and peculiarity of the mind; but a sufficiently wide observation and collection of instances never fail to exhibit discrepancies that completely overthrow the pretensions of *systematic* phrenology. It must still be admitted, I think, that phrenology, like every other honest extravagance, has some portion of truth underlying it; for, unquestionably, there is much reality in many of Gall's cranioscopic observations. Any one remarking, with an ordinary degree of attention, the form and dimensions of different heads, will very soon perceive that an excessively diminutive one never displays either intelligence, or any other force of character; that a small, receding forehead is never in the possession of persons eminent for their thinking powers, but that usually a capacious front and vigorous intellect go together; that a head very high and broad in the sincipital region is commonly associated with great natural morality; and that, on the contrary, a low, contracted head is most ordinarily found upon the shoulders of depraved criminals; and, again, that a large occipital and basilar development is generally found in persons of strong animal propensities. More particular correspondences, indeed, may be noted; but the foregoing illustrations will exemplify the facts that may be verified without difficulty. But concerning phrenology in detail, as a scientific system, I conceive that the evidence furnished by our more advanced knowledge of the brain and nervous system, alike in man and animals, will not sustain the particular theory of separate organs for distinct mental faculties."

We think we have noticed that persons who own large heads and lazy minds are rather prone to believe in phrenology whereas the possessors of small crania are sceptical on this doctrine. In respect to the observations of the connexion between mere size of brain and force, whilst we have the example of Cuvier's immense brain on the one side, we have, on the other, according to M. Peisse, the facts, the head of a wonderfully-calculating boy (Mangiamele) was depressed at the organ of Number; that Napoleon's skull was decidedly a small one, and was depressed in the region which covered in Number, Constructiveness, and Order, whilst neither Causality nor Comparison were more developed than they are on the skulls of ordinary men; and that in Descartes, the front and upper region (the intellectual part) was small.

The chapter "On the Physiological Potency of Ideas," is exceedingly interesting, and could it but be practically engrafted on the public mind would tend greatly to promote self knowledge.

From the brief allusions we have made, it may be justly inferred, that Dr. Noble's work is both interesting and instructive. It is neither too lengthy to attract the unprofessional reader, nor too prosy to please him. Some of the opinions propounded, however, are, in the present state of knowledge, neither proven nor susceptible of proof; and with the partiality natural to preconceived views, we close Dr. Noble's book, unconvinced of the fallacy of our own creed, which differs from his in several particulars. For example, we think we could show cause for considering that the cerebellum is the centre of impulse, the medium through which the feelings and emotions act upon the rest of the body, in addition to being a great organ of reserve nerve-force for the use of the spinal cord; that consciousness is diffusible throughout the whole of the nervous system in degree varying with circumstances, so that we feel *at* the very ends of the nerves, and see *in* the retina as well as by the retina, so long as continuity exists between the nerve-ends and the brain: that hunger and thirst are attributes of the ganglionic centres of the sympathetic; that the self-sense is the attribute of all nerves and nerve-centres, and so far as concerns the viscera, of the sympathetic ganglia; that mental emotion has not any more special connexion with the self-sense than with any of the rest; that all nerves equally influence the nutrition of the parts to which they are finally distributed, and that their diversity of function depends not upon one set acting centripetally and another centrifugally, but upon the manner and place of their peripheral and central terminations. But whilst we say this, we are aware that, in the absence of more proof than at present exists, we have no right to ask credence for unsupported propositions, still less to expect that the reader will, on such grounds, refrain from acquiescing in the opinion of the author.

Mémoire sur l'Anatomie Pathologique des Rétrécissements de l'Uréthre. Par José Prò. pp. 121. Paris: Leclerc. 1856.

With the great demands on our space which always exist, and the vast extent of British literature, we do not introduce to our readers foreign works, unless their claims to notice are of a very extraordinary nature. On this ground, then, we need no apology for calling especial attention to the Mémoire at the head of this article. Its peculiarity is of so striking a kind, that we should be wanting in justice to the whole republic of letters were we to omit to point it out. For it is a matter which concerns every author personally, be he medical or not, that his own proper labours, the hard-earned acquisitions of his own industry and intellect, should not be pilfered from him, and particularly that those acquisitions should not, in some more or less distant part of the world, be represented by another as his own creation and property.

The above work of M. Prò possesses this extraordinary peculiarity, namely, that every portion which is claimed by its author as original is literally translated from an English work, the source being wholly unacknowledged and even unnamed.

The history of this precious production is as follows: Mr. José Prò, in 1856, sent to the Société de Chirurgie of Paris a thesis "On the Pathological Anatomy of Stricture of the Urethra," which was most favourably reported on, its author moreover receiving the thanks of the Society and the title of Corresponding Member.

The work is divided into three parts. The first comprises the anatomy of the urethra, and a synopsis of the views which French and English authors have held respecting urethral stricture from the earliest period to the year 1855. The second part professes to exhibit the author's own researches, and commences with the following sentence.

> "The principal French and English authors who have studied strictures of the urethra having been passed in review, *we shall now make known that which our own proper observations have discovered.*"—p. 47.

This portion, which constitutes, as stated in the preface, "the body of the work," occupies twenty-six quarto pages. Of these twenty-six, *no less than twenty-three are literally translated* from the second chapter of Mr. Henry Thompson's work "On the Pathology and Treatment of Stricture of the Urethra," which gained the Jacksonian Prize in 1852, and was published in 1854. The language is for the most part unaltered, and each paragraph follows the preceding precisely in the order of the original. Of course M. Prò, in his review of French and English authors" just referred to, studiously omits any mention of the work which furnished "his own proper observations on the subject.

The third portion of the work consists solely of extracts from the catalogues of the London museums, which M. Prò states he has visited; and the chapter in question, appropriated from Mr. Thompson's work, is given as the result of M. Prò's study of the preparations contained there.

But we must not omit to do justice to M. Prò's undoubted merits as a translator. The following passage is a fair specimen of his ability, as illustrated at any part of the twenty-three pages aforesaid, and we offer it as a specimen of the rest:—

MR. THOMPSON'S WORK, p. 58.	M. PRÒ'S WORK, p. 50.
"What are the essential elements of organic stricture? and what are the structures in which the constriction itself is seated? Their consideration may be advantageously entered upon together. The first effect of inflammation upon the mucous membrane is a swelling or thickening of it, caused by engorgement of the vessels. Then exudation of an albuminous fluid takes place into its substance and into the tissues beneath, rendering them œdematous, all which matter is absorbed under favourable circumstances; and so far we have the condition which exists in the mere inflammatory stricture, one of the transient forms of the affection, because resolution readily follows. But when the morbid state, persists more or less of fibrillating lymph, or of fibroplastic material are thrown out," &c.	"Maintenant voyons quels sont les éléments essentiellement pathologiques de rétrécissement organique, et dans quels tissus se trouvent ces altérations; nous croyons qu'il y a avantage à traiter en même temps ces deux questions. Le premier effet de l'inflammation sur la membrane muqueuse consiste dans une tuméfaction ou épaississement, causé par l'engorgement des vaisseaux; puis on observe, dans la trame même de la membrane, une exsudation albumineuse, qui s'étend aux tissus environnants, qu'elle rend œdémateux. Toute cette matière se résorb assez vite dans les conditions favorables—c'est-à-dire, dans les rétrécissements inflammatoires qui se terminent par résolution; mais quand l'état morbide persiste, on voit s'épancher de la lymphe plastique en plus ou moins grande abondance," &c.

The succeeding twenty pages of Mr. Thompson's work, a few lines only excepted, are similarly rendered into French; after which, numerous collected cases and remarks on intra-urethral growths are found, all in like manner appropriated; as an example of which the next few lines will suffice:—

MR. THOMPSON—p. 77.	M. PRÒ—p. 66.
"The nature of those (growths) which are found at the interior part of the canal, and which appear almost confined, as regards situation, to the fossa navicularis, appears to be something like that of exuberant granulations elsewhere, but partaking more or less of that of florid vascular tumour also. They are usually soft, and of a rose-red colour," &c.	"La nature des tumeurs que l'on rencontre à la partie antérieure du canal de l'urèthre, et qui sont presque toujours limitées à la fosse naviculiare, semble analogue à celle des excroissances granuleuses que l'on constate dans d'autres points; mais elles se rapproche encore plus souvent de la structure des tumeurs érectiles. Elles sont ordinairement molle, de couleur rosée," &c.

We have only to add, that M. Prò, in perpetrating one of the most shameless and extensive plagiarisms which has been brought to light for many years, has paid a great compliment to their real author, and that the Société de Chirurgie, by conferring their highest distinctions upon the supposed original observer, have quite unwittingly confirmed it.

An Essay on Physiological Psychology. By ROBERT DUNN, F.R.C.S. pp. 94. London: Churchill.

MEN of science are often, physical as well as mental, prodigies of work. Those who accomplish tasks, each of which appears sufficient burden for one pair of shoulders, and sufficient fruit for one life-time, usually have, in addition, their full daily share of common wants and common cares to put up with. In our profession this is particularly seen. It is amid constantly-pressing cases, and daily duties which render the setting aside of spare moments a work of much contrivance, that nearly all the most elaborate and valuable contributions to medical literature have been penned. And the supplementary work thus accomplished is not confined to matters that lie in the professional path. For in every department of science, whether abstract or material, we find, amongst the foremost names, those of puissant workers from amid our ranks, who can only occupy in such studies the mere interstices of their time; even as much pure spirit may be poured into a cup, seemingly full of water, without over-running the brim.

In this essay of Mr. Dunn on Physiological Psychology, we have the results of many years of thought amid all the distractions of pressing professional duties. *Primâ facie*, the subject seems only one phase of medical study. But true knowledge of the history of psychology implies a much wider range of work. Between the first glimmerings of truth in Aristotle's treatise, "De Animâ," and the modern recognition of a close analogical relation between natural and mental phenomena, there is a long weary intellectual journey for the pilgrim of psychological science—amid the pit-falls of materialism and the fog-banks of the *haute école* of metaphysics. Any attempt to define the working methods of the mind without previous physiological knowledge of the instrument of the mind, would now appear nearly akin to audacity. Hence the conclusions of the old-world students of psychology were no more likely to be reliable than the alchemist's principles of chemistry, the stoic's abstract ideas of virtue, or the epicurean's notions of true pleasure; and their castles in the air all toppled and fell when Bacon took philosophy off her stilts, and taught how, without first making firm the foundation, the builder builds in vain.

We are no longer trammelled with that littleness of faith which imputed materialism to Hartley, and which in the very attempt to curb physiological research or speculation, implies an impious doubt that there may be discovered some want of harmony in the all-perfect works of the Creator. True and accurate knowledge of the development and physiological functions of the nerve-centres is now acknowledged to be essential to the right study of psychology; and it is only through such knowledge that we can expect, either directly, or by the method of exclusion, to arrive at any logical conclusions concerning mental phenomena. As may be gathered from its title, this is carefully kept in view throughout the essay of Mr. Dunn. He particularly points out the advancing development of the encephalon according to one uniform type, as we ascend in the scale of vertebrate animals up to man. The corresponding development of consciousness, as manifested in what Cuvier called "the living experiments which Nature has presented to us in an ascending series, in the varying forms of animal existence," is carefully traced. And then the relations between the physical development of the encephalon in man and his intellectual endowments are attentively considered. Instinctive actions he possesses, as he possesses cerebral organs physically analogous to those of animals which possess only instinctive actions. But above and beyond these are higher grades of consciousness peculiar to man, and the relations between these and the higher cerebral development are ably discussed in the essay of Mr. Dunn. He recognises three phases of consciousness, under which all mental phenomena are thus grouped:

> "Sensori-motor, consensual and instinctive feelings and actions are the phenomena which formulate the sensational consciousness; to these are superadded ideation and volition, with their associates, memory and emotional sensibility, as the essential phenomena of the perceptive consciousness, and to these, imagination, imitation, articulate speech or language, ratiocination and the processes of thought and reflection, as the distinguishing attributes of the intellectual consciousness."

The development of the nervous apparatus more immediately in relation with the perceptive and intellectual consciousness, is made the subject of special study throughout this essay, and the conclusions and collected observations of the author, which are both original and thoughtful, will deserve the consideration with which they were received by eminent psychologists when first brought before the notice of the profession.

Dr. BROWN-SÉQUARD'S LECTURES.

Dr. Brown-Séquard has concluded his course of lectures, at the Royal College of Surgeons, amidst the enthusiastic acclamations of a crowded scientific audience. The interest created by these extraordinary discourses continued to increase up to the last moment of their delivery.

It is in the highest degree gratifying to introduce to our readers the productions of so distinguished a Physiologist; indeed, the author's name is a sufficient guarantee for their excellence. But lest some should hesitate to attach full weight to his experience, through not being acquainted with the long and arduous course of patient investigation that led Dr. Brown-Séquard to his brilliant discoveries, we take this opportunity of briefly sketching his scientific career.

Born a British subject, in an English colony, of an American father, more than fourteen years have elapsed since this gentleman entered upon a series of experimental researches on various animals, with a view to ascertain the truth on many of the more obscure points of Physiology and Pathology. Commenced in Paris, these investigations were subsequently carried on in the Mauritius and in the United States, and they have been prosecuted with little intermission up to the present time. The results have been from time to time given to the world in communications to the French Academy of Sciences, in the periodicals of the day, or in Lectures delivered in Paris, in the United States, at St. Bartholomew's Hospital, and in the course just now concluded at the College of Surgeons.

The French Academy of Sciences have fully acknowledged their sense of the value of Dr. Brown-Séquard's labours, by presenting him with prizes, and with honorary and pecuniary rewards, most of them for his researches on the nervous system, as well as for his investigations on the blood. Nor is a just appreciation of Dr. Brown-Séquard's merits confined to the scientific circles of Paris. In America he has lectured to large and distinguished audiences of physicians and men of science, and has received most substantial proofs of appreciation from more than one institution in that country. In England, the Royal Society has, on two different occasions, voted to him a portion of the Government grant of money, entrusted to them to distribute in aid of scientific research. In 1856, Dr. Brown-Séquard received a tenth of the whole sum at their disposal, and in the succeeding year a considerable amount was awarded to him in furtherance of his eminently practical investigations. No greater compliment could be paid to the discrimination of the Council of the Royal Society than is now offered in the interest exhibited by the medical and scientific public in Dr. Brown-Séquard's Lectures. At these may be seen men in the highest rank of their profession and in active practice, who snatch an hour from their too short day to listen to a lecture, in which they cannot fail to hear something of direct practical interest. There, too, may be found the most accomplished physiologists of the day, content to be taught by one whose ingenuity and dexterity *all* cannot but admire, and whose opinions and trust-worthy observations *they* have learnt by experience to respect.

NECESSITY OF EFFICIENT VACCINATION.

The student of the writings of Jenner cannot be more struck with the perfect confidence he expressed in the power of *successful* vaccination to guard the human constitution against small-pox, than with the great stress he invariably laid on the precise and very definite character of the affection of the system resulting from the introduction of vaccine lymph, from which alone that protection could be derived. His belief and teaching were, that it was impossible to be too cautious in the selection of lymph, too watchful in regard to the state of the health of the child to be operated on, or too attentive to the local action induced by the vaccination. He held that lymph taken from a vesicle which deviated from the normal type, or from a genuine vesicle at too late a period, might afford an insufficient protection, and that all so vaccinated might be more or less liable to small-pox. Even when genuine lymph had been used, there might be circumstances which would interfere with the progress of the vaccine affection, and it was therefore necessary to *watch* in every case, and none were to be held safe who had not been so watched, and, when necessary, tested by re-vaccination.

Within a year, indeed, of the publication of his first treatise on vaccination, serious errors had begun to creep in, and he felt it necessary, in a second tract, "to point out the fallacious sources form whence a disease imitative of the true variolæ vaccinæ might arise, with a view of preventing those who may inoculate from producing a spurious disease." A few years later (in 1804), in a letter to Lord BERKELEY, he mentioned his expectation that cases of failure would occur in considerable numbers, for want of that accurate discrimination between "the perfect and imperfect pustule," without which, he says, "to inoculate the cow-pox is folly and presumption." Writing to Mr. DUNNING in the same year, he says, "You will have enough of small-pox after cow-pox. It must be so. Every bungling vaccinist who excites a pustule on the arm will swear it was correct, without knowing that nicety of distinction which every man ought to know before he takes up the vaccine lancet." In other letters he condemns the use of lymph taken at too late a period, and speaks of the modifications which its quality may undergo in passing through the skins of those affected with various cutaneous diseases, as herpes, &c., so that "it will produce pustules of a diminutive size, with a faint, or even without any, areola, and finishing its course prematurely." And in 1817, he relates to MOORE, the fact of a parish vaccination by contract, conducted by a medical man, the lymph taken from two very imperfect vesicles on the arms of a scabby child, which he had condemned as deceptions. In regard to his own vaccinations, it was a circumstance which teased and annoyed him considerably, that in numerous instances those vaccinated by him did not give him an opportunity of judging of their security by ever returning to show him their arms.

Such were the obstacles to correct vaccination pointed out by JENNER, and there is not one of them which does not exist at the present day. The discrimination between the perfect and imperfect vesicle is often not correctly made, and lymph is taken from vesicles which deviate from the normal standard. Even from a normal vesicle it is frequently taken at too late a period. Before inserting it, due inquiry is not made into the existence of those affections, as herpes and intertrigo, which, without inquiry, would often escape notice altogether, but yet which seriously interfere with the due course of vaccine affection; sometimes, indeed, there is an absence of knowledge that such diseases are of any consequence at all. The most correct and scrupulous vaccinator meets with many difficulties in ascertaining by inspection the success of the operation he has performed, and is, indeed, often deprived of the opportunity of doing so altogether.

It would be easy to produce illustrations of every one of these sources of failure, but it is not needed; for so numerous are they, that we are convinced there are few of our readers who have paid much attention to this subject, whose experience will not supply them with such. The result is truly lamentable. Many persons are reported vaccinated in whom the operation has produced no effect at all; others go through a disease which they are either told or imagine to be the vaccine affection, but which is in reality a spurious disease. If these persons become at any time exposed to the contagion of small-pox, they contract the disease, and perhaps they die; and not only is life thus sacrificed, but the greatest discredit is brought on vaccination itself.

To the extent to which the vaccinations of this country are tainted with these sources of error, the attention of Parliament was called some years ago by the Epidemiological Society. Instances were given especially of that error, which, Mr. MARSON believes, causes more mischief than all other causes put together—the taking of lymph at too advanced a period of the vesicle. It was shown that in many instances children were reported *and registered* as vaccinated, whose arms presented not the least marks of cicatrix, and in whom the insertion of vaccine lymph was found to develope the genuine disease. The elaborate inquiry undertaken by Mr. SIMON confirmed these statements, and justified the conclusion at which he arrived, "that there is current in England and Wales not only an appreciable amount of utterly incompetent vaccination, but a very considerable amount of second-rate vaccination." Mr. MARSON, indeed, had stated to the same effect some years before, and his statement has the more value because it was part of a purely scientific inquiry, undertaken without any relation whatever to the laws regulating vaccination. While his ample opportunities at the Small-pox Hospital had proved to him that the Danes, Swedes, Norwegians, and Germans are better vaccinated than any other people, they also showed that England and France are at the bottom of the scale.

And really this is not to be wondered at, as regards England, when we think of what the system in this country has been; or, rather, how entirely vaccination has been left to take its chance without any system or organization whatever. Till the Act of 1853, there was nothing in the law to prevent any amateur from trying his hand at vaccination—chemists and druggists, midwives, old women with stocking needles; anyone might "cut for the cow-pox," and anyone so cut looked on himself, of course, as vaccinated. The Act of 1853 required that, as regards all children born after its passing, the operation should be performed, and its success ascertained by inspection, by a duly qualified medical man; but in respect of this, as of its other provisions, there is no one to see that they are carried out. So the so-called vaccination of chemists and druggists may flourish still, and the duly-qualified medical man may be represented, if he will—nay, is represented sometimes—by his unqualified assistant. Indeed, so utterly defective are all the provisions with regard to vaccination in this country, that even a legally-qualified medical practitioner may be without the requisite knowledge of vaccination, and the very errors to which we have called attention have occurred in the practice of such. Though it depends on the correct or incorrect performance of this operation whether a person has real immunity from a hideous and fatal disease, or only a false sense of security which may lure him into danger, but cannot save him from destruction, our Legislature has never thought that any care need be taken that vaccinators really know their work, nor even that it was needful to make any provision for instruction in vaccination at all. All is left to chance. If a medical man has been the pupil of a careful vaccinator, he will have acquired a competent knowledge of vaccination, and it will be well for him and his patients; but what if he have been a pupil of a careless and incompetent man—of such a one as he of whom JENNER speaks in his letter to MOORE? Or if, as is not uncommon now-a-days, he have not resided with a medical man at all? The whole thing is too bad to last. It must be corrected, and that speedily, unless this country is willing to remain under the stigma of being the worst vaccinated country in Europe. And none are more interested in having it corrected than the great body of public vaccinators—men who thoroughly know their work, and take pride in it, and to whom it must be a source of constant annoyance to be confounded with the comparatively few amongst them whose misdoings have brought such discredit on the vaccinations of England.

HOMŒOPATHIC QUACKERY.

QUACKERY, in a thousand shapes, is a curse of the age, and the besetting sin of our civilization. It is the growing vice of modern society, the canker in the bud of our progress: in politics, in trade, in manufacture, in the liberal professions, an age of puffing and falsehood is inaugurated. A short cut has been opened to fortune and to fame. It is wearisome to labour, to strive, and to excel; but it is easy to claim merit; it is a facile task to pretend to originality, or to announce success. A new fabric, an improved process, a real advance in medicine or in pathology, is to be won only by toil and pains, self-denial and perseverance; each involves difficult sacrifices. It is far easier to indite a lie or to invent a puff, to plan an advertisement or to paint a van. It often answers the end proposed. Hence false pretences walk the street, and hustle plain Honesty off the "*pavé.*" Men seek only to array their emptiness in finer clothes than their neighbour; to blow a louder trumpet; to daub a more glaring colour. This secret immorality which surrounds us has knocked at our door; and sin never lies long upon the threshold. The quackery, the puffing, the false boasting of pretenders resound in ceaseless gabble amongst a crowd of men who assume the medical title. Systems of fraud and folly grow apace. It behoves us strongly to resist these treacherous encroachments. Their professors are strong in vigour and unblushing in effrontery; homœopathists, mesmerists, hydropathists, and the like, they are men who have sacrificed science and debased morality by embracing falsehood and practising deception. The members of an honourable profession cannot, therefore, hold any terms with them. It is time that a very clear and sharp decision should be pronounced. Quackery of any kind is folly, falsehood, or scoundrelism. In its mildest form it can never be harmless. There must be no dallying with it. Truth is white: falsehood is black. Let every man choose between them. We can have no neutral tints; no grey cats; no twilight concealments; no doubtful partizans. We are bound to take this stand; for it is an honourable and just principle which dictates it.

No feeling is more general or stronger in the professional mind at this moment than the conviction that the time has come for a clear, rigorous, and unequivocal definition of the rules that ought to guide the practitioner of medicine when brought into professional collision or contact with charlatans. In our experience, we do not remember a more painful feeling of distrust and indignation having been excited throughout town and provinces, than in consequence of the reported sanction afforded to a charlatan of the homœopathic species by a surgeon who had justly stood high in the esteem of his professional brethren. Such a suspicion, if well-founded or left to ferment, would tend to destroy all confidence between the different members of the profession; to break up what we may call the solidarity of the medical body; to weaken the just influence we possess with the public; and finally, to degrade Medicine from her proud position as a beneficent science to the abject level of the vile impostures, such as homœopathy and mesmerism, that now seek to wriggle into public estimation by establishing a loathsome parasitical dependence upon her. Let the stately and sturdy oak reject the first treacherous embrace of the crawling ivy, and it will continue to expand its green boughs and flourish; but let it suffer the first suckers of the asphyxiating creeper to lay hold upon the trunk, and soon the noble tree will be stifled, as were the sons of LAOCOON, in the ever-spreading and ever-tightening folds of the serpent.

Medicine can only flourish like the oak. She must keep herself pure from the polluting touch of quackery. More than that, her chastity, like that of CÆSAR's wife, must not even be suspected. No true disciple of HIPPOCRATES will seek to play fast and loose with the divine art. No physician, no surgeon, howsoever high his station, must expect to minister to charlatanry one day, and to meet his brethren on friendly terms the next. No man can serve two masters. He cannot be permitted with the same hand to receive the reward of virtue and the wages of sin. Each must choose his career. Duplicity, betrayal, the profession will not endure. Medicine a man may follow; or her personation, Charlatanism; but both, he shall not. It is no more possible for a man honestly to keep terms with Medicine and with quackery than it is to plant one foot on the North pole, and the other on the South.

The facts which have given rise to this painful agitation are generally known to the profession. We need only briefly recapitulate them. A gentleman in the neighbourhood of Stamford was afflicted with retention of urine. Mr. Philbrick, a most respectable surgeon of that town, whose conduct throughout entitles him to the highest esteem of his brethren and the public, was called in. On the next day it was proposed to Mr. Philbrick to meet a Dr. Bell, a London globulist. In what manner a skilful surgeon could be aided in relieving retention of urine by consultation with such a person it is impossible to imagine. Mr. Philbrick took the part which became him as a member of an honourable profession, having a just regard to his duty, to the patient, to his own character, and to his brethren, by declining to meet him. Dr. Paley, of Peterborough, was thereupon invited to meet Mr. Philbrick. Yet in a few days the globulist appears, and Mr. Philbrick refused to attend with him. The services of a surgeon were, however, needed, there being, we presume, no globulistic hocus-pocus to relieve retention of urine. Mr. Jackson, the senior surgeon of the Stamford Infirmary, was found willing to do what Mr. Philbrick had refused to undertake. This gentleman is said "to have done what was necessary, and to have acted under Dr. Bell's orders"! attending to the surgical department only, and not seeing Dr. Bell in the medical treatment. Under this anomalous system, the patient getting worse, Dr. Bell applied to Mr. Fergusson, who accompanied that person to Stamford, where they met Mr. Jackson. These, we believe, are the facts of the case. *Primâ facie*, it had appeared that Mr. Fergusson gave the deliberate sanction of his authority to the practice of consulting with persons outside the pale of the profession. As we fully expected, Mr. Fergusson emphatically denies the relevancy of this imputation. In a letter to this journal, published last week, he says, "I accompanied Dr. Bell to Lincolnshire in an urgent surgical case. I have not seen the patient since. I do not consult with homœopaths. I have no faith in homœopathy. I give no encouragement to homœopaths to consult me.

The profession will of course rejoice to hear this disavowal of any co-operation with charlatanry from Mr. Fergusson. We agree with him that when a surgeon is called upon for his assistance in an urgent case, he is bound to give it, *pro hâc vice*, even if he knew a charlatan to be in attendance. Humane consideration for the ignorance or folly of the sufferer will dictate to the surgeon the propriety of aiding him in his extremity. But there his duty begins and ends. He must not refuse to listen to the call of a sick man; nor must he go one step beyond this obvious duty. No deference to the station of the patient, no appeal to the patient's friends, no circumstances ought to induce the surgeon for one moment to lend his countenance, actively or passively, really or ostensibly, to the sanction of what he believes to be imposture and fraud. When he has ministered to the relief of the patient, he should retire unless the quack be dismissed, for should he remain, if only to look on, and thus far participate in the treatment which is dictated by an associated charlatan, from that moment he is imperilling his own character; he is guilty of treason to his profession; he is an accomplice in the iniquity of cheating a credulous sick man; he is bolstering up a lie and a fraud, by giving it the semblance of the countenance of science.

Indeed, the iniquity of such conduct is even greater, because it is more mean and despicable than that of the quack himself. A quack may to a certain extent be the dupe of his own folly; the ignorance that is so often combined with knavery may lead him to believe with more or less of sincerity in the efficacy of his nostrum. But the educated physician or surgeon can put forth no such plea; for him there are no extenuating circumstances, no palliation. The postponement, the wilful suppression of the truth, or tacit consent in its suppression, implied when a medical practitioner consults with a quack, is nothing more or less than a connivance in fraud.

We conceive that the proper way for a physician or surgeon to pursue when called in to see a patient oppressed by charlatanic influence is, promptly to answer the call. He is bound to give the best assistance in his power, surgical or medical, that may be necessary under instant circumstances. The first duty accomplished, his next is to inform the patient and his friends, in plain terms, what view he has taken of the case; he should say what measures are necessary for the patient's welfare; and this done, then it is his duty to decline any responsibility or further participation in the case, if the concurrent attendance of a charlatan is insisted upon. With such a course we think the public could not reasonably find fault. We are further of opinion that in no case can a medical practitioner be fairly expected to meet a charlatan in deliberate consultation. Such a proceeding is so obviously a farce, insulting to the medical practioner, and utterly fruitless of good to the patient, that nothing short of a combination of dishonesty on the one part, and of fatuity on the other, can ever bring such a disgraceful absurdity into action.

We are sure the profession from one end of the country to the other will applaud the resolution taken by the practitioners of Southampton, which we print in another part of our columns. Our brethren in all parts of the kingdom have indeed shown an admirable *esprit de corps* in questions of this kind. They are entitled to a reciprocation of the like sentiments from their metropolitan brethren. There must be no dallying, no trifling in a matter that now touches the most vital interests of the profession and the cause of science. Every medical society, every body in which medical practitioners are associated, ought to pass resolutions binding its members in no way to countenance homœopathic, mesmeric, or any other form of quackery; but to repudiate it utterly and for ever. Such resolutions would be strictly Hipocratic in spirit; they would be in perfect harmony with the oaths and pledges given on accepting the diplomas of the College; they are now necessary for the purpose of clearly defining the duties of honourable practitioners of medicine towards themselves, their profession, and the public. With these duties, couched in unequivocal language, and emphatically recognised by everyone throughout all ranks of the profession, the honour and dignity of Medicine will be vindicated; each member will feel, that, in acting up to this spirit he is supported by the active sympathy of his brethren; and the man who transgresses will feel that he has placed an impassable barrier between himself and the profession he has betrayed.

We say again, that the hour has come when every man who claims to be one of us must choose his path. It is clear and straight before him:

> "Sunt certi denique fines,
> Quos ultra citraque nequit consistere rectum."

The proverb tells us that we may judge of a man by his companions. He who herds with quacks—he who stoops to pick up a dirty fee proffered in consultation with a homœopath—accepts a bribe to betray his brethren, and forfeits all claim to professional and, we will add, to public respect. Such men the profession will despise and cast out from amongst them.

While it is impossible to speak too highly of the just, dignified, and truly honourable conduct of Mr. PHILBRICK throughout this painful transaction, that of Mr. JACKSON *appears* to call for an unqualified expression of censure. Has Mr. JACKSON any explanation to offer? If so we will record it on resuming the subject in the next LANCET.

Miscellaneous Correspondence, &c.

THE MARSHALL HALL METHOD OF TREATMENT IN ASPHYXIA.

To the Editor of THE LANCET.

SIR,—I feel constrained to add my mite of tribute to the memory of one, whose comprehensive mind, prompted by a noble and philanthropic heart, was ever actively engaged in exploring the profound mysteries of science, and applying its great truths, when carefully elaborated, to the good of universal humanity. Such men as Dr. Marshall Hall are so like "angels' visits," in these days of blustering pretension and downright empiricism, both in and out of the profession, that I think their characters should be held up as exemplars for their contemporaries and those who may come after them; and their pure and unselfish devotion to the great cause of suffering humanity, should embalm their memories in the grateful heart of every true lover of his race. In an age emphatically utilitarian—when "put money in thy purse," and

> "Crook the pregnant hinges of the knee
> Where thrift may follow fawning,"

constitute the *primum mobile* of all human action—it is peculiarly refreshing to the mind to contemplate the character of one who, nobly rising above all thought of self, sedulously devoted the untiring energies of his masterly mind to the good of his fellow-creatures; who, though himself the subject of a painful and incurable disease, laboured assiduously in the vast fields of science, and with a benevolence of heart that extended to the whole human family, distributed the rich and enduring products of his zeal and industry for the universal good. He, like Jenner, needs no monument to tell the story of his greatness. His simple name, nobler and more exalted far than all the titles of Europe could make it, will endure as long as science itself; and wherever there is human life to save, his "Ready Method" will embalm his memory with volumes of incense from off the altars of grateful hearts. Call him no longer, I pray you, the *English Physiologist*, for the medical profession throughout the whole world have already, by acclamation, inaugurated him THE PHYSIOLOGIST; and a spontaneous shout of mingled joy and gratitude, welling up from the great deep of glad hearts, from the water's edge and the lying-in-room, proclaims him *The Benefactor.*

CASE.—Mrs. C——, aged twenty-seven years, was taken in labour with her first child on a Wednesday in June last, at two o'clock, A.M. She was attended by a negro midwife, from whom I learned that the membranes ruptured at four o'clock in the afternoon; head presenting; pains regular and quite severe. Next day and night the pains were lingering and inefficient; and as the labour was not progressing satisfactorily, I was summoned to her assistance at noon on Friday. I found the fœtal head presenting, firmly impacted in the pelvis, and stoutly resisted by exceedingly rigid and unyielding soft parts. I bled her to six ounces, and, by manipulating the tired uterus through the abdominal walls, soon succeeded in delivering her of a very large male child. It was to all appearance dead, exceedingly livid, and no pulsation whatever was observable in the cord, which was twice coiled about the neck and once under the arms.

Apprehensive lest a knowledge of its death might injuriously depress the mother, I delayed removing it for about five minutes. When about handing it to the nurse to remove it to another room, the Ready Method, which I had read some months before in The Lancet, suddenly occurred to my mind. I immediately took it to a door, and exposed it freely to the fresh air, which was blowing cool at the time, I commenced the prone and postural movements of the Marshall Hall Method. I had continued for about fifteen or twenty minutes without any encouragement, except an improvement in its colour, when I was hastily summoned to the mother, whom, in my zeal to test the new method, I had quite forgotten. Directing the nurse to continue the movements, I cleared the mother, and returning to the child resumed my efforts. In about twenty-five minutes from the removal to the door, its little chest was suddenly thrilled with a convulsive effort at respiration, succeeded at intervals by short sighs, and then by a feeble cry. At the expiration of forty-five or fifty minutes, it cried lustily, and I had the satisfaction of presenting it to the father, assuring him that he was indebted to Dr. Marshall Hall, of London, for the life of his child.

I am, Sir, your obedient servant,

J. M. Towler, A.M., M.D.

Columbia, Tennessee, U.S., Feb., 1858.

MEDICAL PSYCHOLOGY.

To the Editor of The Lancet.

Sir,—I am desirous of calling the attention of yourself and of the profession to what I consider a great evil, believing that by so doing I shall be taking the most direct means towards obtaining a remedy. It is a well-known fact that medical psychology is a branch of the profession which is rarely made the subject of study, except by a very small proportion of medical men; students seldom make it a part of their curriculum, partly because it is not required by the examining boards, principally because their work is already so varied and great; but when it is considered that the period in which they are engaged in their hospital duties is the only part of their lives in which the majority have an opportunity of acquiring any knowledge of mental disease, while almost every medical man is called upon occasionally to take a prominent and responsible part in these painful cases, I think it is clearly necessary that every opportunity and facility should be afforded to those students who can be prevailed upon to make use of them. But is this the case? Far from it. There are four large lunatic asylums in or near London, and at only two of these are students admitted to see the practice. Having seen an advertisement from one of these (the Bethlem) in The Lancet, in which it was stated that the fee for three months' attendance on the practice and lectures was £3 3s., and concluding with an intimation that the "medical officers would enter students and give all necessary information," I went down a short time since for the purpose of making some inquiries preparatory to entering my name. I was shown into a room, and sent my card to Dr. Hood, who came in shortly afterwards, and appeared rather surprised when he heard my business, as he said I should find all the "necessary information" in the advertisement. I had scarcely time to ask him half a dozen questions before he left me abruptly and not very courteously, but not before I had obtained sufficient information to convince me that I should be wasting both time and money by attending the Bethlem Hospital. In answer to my question as to when the lectures spoken of in the advertisement would commence, he replied that it was *very uncertain* if any lectures would be given, as it entirely depended upon the number of students who entered. The days for attending the practice are Tuesdays, Wednesdays, and Thursdays, at twelve; and when I ventured to ask what length of time was occupied in going round, he answered, to my great astonishment, "Oh! about half an hour; *never longer.*"

And these, Sir, are the opportunities offered in London to become acquainted with a class of diseases which are becoming more and more rife in this country, and with which every one of us, it is almost certain, will often meet and have to deal in practice. Surely this half-hour's *race* round the wards on three consecutive days in each week, with the *remote chance* of an occasional lecture, is not seriously regarded as a means of acquiring a knowledge of psychology; it must rather be a little farce got up for the express purpose of signing the schedules of those amongst us who intend entering the army or the Hon. East India Company's service.

Before concluding, I ought to add, in justice to the staff of St. Luke's, as well as for the information of others, that I subsequently paid a visit to this hospital, where I met with a gentlemanly reception from Dr. Stevens, and was informed that I could go round the wards with Dr. Sutherland on Mondays, at eleven; with Dr. Monro on Thursdays, at two; and with Dr. Stevens any morning, at ten; and that Dr. Sutherland would deliver a course of lectures on insanity in May or June; while the fee was the same as at Bethlem—viz. £3 3s. This is more satisfactory; but why should this be the only one of our metropolitan asylums where the students may acquire some knowledge of mental diseases? The others have, indeed, "dwindled down from magnificent national institutions to mere local caravansaries,"

I am, Sir, your obedient servant,

Stamford Felce.

St. Mary's Hospital, May, 1858.

THE RAPID ABSORPTION OF POISONS.

[Letter from Dr. E. Cooper Willis.]

To the Editor of The Lancet.

Sir,—The doctrine of the sympathetic action of poisons is now by most authorities numbered amongst "the things that have been." There are, however, still a few who doubt whether absorption and circulating power can be sufficiently rapid to account for the extremely short duration of time which elapses between the introduction of some poisons into, and their action upon, the system. I trust, therefore, that the memoranda of the following experiments may prove interesting to some of your readers, tending, as they do, to show, not so much the velocity of circulation, but the diffusive power of certain poisons, and to demonstrate the fact, that prussic acid may be found in the tissues where theory would teach us to look for it, but in which there has often been some difficulty in detecting it. I have no new test to bring forward, no new dictum with regard to the *modus operandi* of the poison, but simply offer these few facts as contributions confirmatory of the opinions and experiments of others.

Experiment 1.—Into the pleura of a young rabbit, aged seven weeks, I injected one drachm of dilute prussic acid, containing four per cent. of the strong acid. Symptoms commenced in ten seconds; and death supervened in twenty-five more. The moment that the symptoms commenced, I drew a string, which I had previously placed loosely round one of the hind legs, so tightly as to stop all possible circulation; it was in fact, as tight as it could possibly be drawn. The leg was immediately cut off below the ligature, and laid by in a little fresh water, well covered up. The next day, though perfectly unable to detect the least odour of prussic acid, I obtained unmistakable evidence of its existence, both by the sulpho-cyanogen test, and also by Scheele's test after distillation by means of a water-bath.

Experiment 2.—This was a repetition of the first, but with this difference, that symptoms began and the leg was tied at the end of eight seconds. Death ensued in thirty seconds. In this instance also, I obtained evidence from the water in which the leg was immersed by both tests, and by the sense of smell in addition.

Experiment 3.—The same quantity was injected into the pleura of a small pup, five days old. Symptoms began and the leg was tied four seconds only after the injection; and in this instance also I was enabled, by smell and the sulpho-cyanogen test, to demonstrate satisfactorily the presence of the acid.

These experiments were performed in the presence of several pupils, whose noses and eyes I brought into requisition to confirm my own senses.

I conceive, however, that we are not bound to believe that this poison (and others also) is tied up, as it were, in a certain small quantum of blood along which it is carried through the vessels, but that there is a diffusiveness in it by means of which it may pass on in advance of the blood, and so surpass the circulation itself in rapidity of action.

I remain, Sir, yours, &c.,
E. Cooper Willis, M.D.

Lower Baggot-street, Dublin, May, 1858.

Professor of Forensic Medicine at Steeven's Hospital.

CÆSARIAN SECTION.

To the Editor of The Lancet.

Sir:—In 1851, Dr. Robert Greenhalgh read a paper before the Medical Society of London, to prove that within three years he had employed the speculum in 1000 cases, and had found it of little or no use! Having been thrown from this gigantic hobby-horse, this practitioner looks about for another steed, and unhappily seizes hold of the Cæsarian section. As yet he has only had two fatal cases, of which he has recorded one; but I trust he is content, and that he will not again wish to *test the value of this operation.* The profession will concede to him the *éclat* of having performed the Cæsarian section in a case where Sir Charles Locock, Dr. Tyler Smith, and I suppose most medical men, would have resorted to premature labour, craniotomy, or turning. That premature labour ought to have been induced soon after the patient was first seen no one will doubt, especially since the operator seems to grant this point, though with remarkable simplicity he avers that it "could not be effected, because the os uteri could not be reached by any possible mode which appeared to me." Why, Sir, of the eight different methods of inducing uterine contractions, five are practised successfully without touching the uterus with the finger, and amongst these five is the best—that of Kiwisch, of Prague—as Dr. Tyler Smith has well shown.

In order to prevent any further sacrifice of life, as well as to satisfy Dr. Greenhalgh that he may advantageously dispense with this abominable operation, which Dr. West regards as fatal to more than 85 per cent. of the mothers,) allow me to give him two opinions, an old and a modern one. Mauriceau, writing in 1681, affirms that there are very few, if any, cases of difficult labour, in which an *experienced* accoucheur would fail to extract the child, whole or in pieces, without recourse to the Cæsarian section. In the present day, Dr. Robert Lee, who has probably seen more cases of difficult midwifery from deformed pelves than any living physician, states that he has never had a woman die undelivered in his practice; and that he has never met with any case of distortion, however great, where he has not succeeded in completing delivery with the perforator and crotchet.

As my name would give no force to these statements, I beg to subscribe myself,

Your obedient servant,
Obstetrix.

May, 1858.

ON THE USE OF ALCOHOLIC STIMULANTS IN THE TREATMENT OF UTERINE HÆMORRHAGE AFTER DELIVERY.

To the Editor of The Lancet.

Sir,—My experience as an accoucheur is derived from private practice only, and I am not able to write upon the subject of the treatment of this very serious disease with the authority which some men might assume. But upwards of thirty years' practice has afforded me a fair share of opportunity for observation, and I have no hesitation in saying that in every case of uterine hæmorrhage after delivery which I have attended, not only have I used alcoholic stimulus with advantage whenever the vital powers have been unduly depressed by loss of blood, but that I have in some cases had every reason to believe that without it they would have proved fatal. But I have not rested satisfied with using, in addition to the exhibition of stimulants, what Mr. Higginbottom calls "the customary local applications"—that is, I suppose, cold affusion with pressure; I have, in every case, *emptied the uterus* with the hand. Bearing in mind that, after delivery, hæmorrhage is significant of an unclosed state of the uterine vessels from want of contraction of the organ, and coming to the conclusion that it is unable to contract from a twofold cause,—viz.: primarily, from its containing something over which it will not close; and secondarily, from the patient not possessing, in consequence of the loss of blood, sufficient vital power to produce contractility in it,—I have combined these two indications of treatment, by giving, whenever it could be procured, hot brandy-and-water (which I consider more stimulating than brandy alone), and by cleaning out the uterus by the introduction of the hand high up, as far as the upper pyriform extremity, making external pressure while it is being gradually withdrawn. When I say that the uterus is prevented contracting, owing to its containing something over which it would not close, I do not mean a substance, such as the placenta, which of course every physician would at once remove, but clots of blood; and I believe that a very small clot will suffice, in some cases, to prevent contraction, especially when the contractile power of the organ is diminished by loss of vital power from sudden hæmorrhage; and I will give two cases in point.

One, a married woman, had, on two previous occasions after delivery, hæmorrhage. I was out when the summons to attend her came, but my assistant went immediately to her. On my return, however, I hurried down to her house, recollecting her disposition to hæmorrhage. A few doors from her house I met my assistant. He told me there had been smart flooding after the delivery, that he had removed the placenta, and had left the uterus well contracted. While we were standing to have this communication, the husband ran up hastily, and said his wife was dying. We found her faint and gasping; a stream of blood running down the side of the bed. Giving her some brandy, I introduced my hand and forearm into the uterus. I found a slight contraction had taken place, about the distance of one-third from the neck; above this it was fully dilated and filled with blood.

I have reason to believe in this case, that irregular contraction took place in the lower part of the organ, after the removal of the placenta, but that the upper part refused to close over some clots which were left. I kept my hand in the uterus, touching the upper extremity with my fingers, until I felt contraction taking place, then gradually withdrew it, bringing down the clotted blood it contained; external pressure was made, and hot brandy-and-water given at intervals of half. a minute simultaneously; a compress over the region was secured by a bandage firmly drawn, a dose of laudanum administered, and the woman did well.

The other case was something similar, except that the placenta came away naturally, without any hæmorrhage. I had convinced myself, as my custom is, that the uterus was contracted; it was apparently as round as a ball. I had washed my hands, and was about to congratulate my patient, and take my leave, when I observed her become deathly faint, and at the same moment a sound of fluid dripping from the bed was heard. Instantly taking off my coat from the right arm, and introducing my hand, I became aware of two bands of contraction, leaving interstices filled with blood. I have no doubt that there was also irregular contraction in this case, owing to the presence of small clots of blood interfering with the perfect and uniform closure of the uterine cavity. The same treatment was observed as in the former case, and the patient recovered. This was her first child.

I have adopted this treatment in all subsequent cases of uterine hæmorrhage after delivery, and always with success, never having met with the *misfortune* of being called to a patient whose vital power was too far gone to give rise to contraction. No doubt such cases often occur. I consider this practice to be based on rational principles; while the treatment by ipecacuanha, recommended by Mr. Higginbottom, appears to be, to say the least of it, empirical. When hæmorrhage is suspected, a dose of secale, administered at the close of the birth of the child, is a safe and good adjunct.

I am, Sir, your obedient servant,

SPENCER PIDCOCK, M.R.C.S.

Watford, April, 1858.

THE LATE DR. MARSHALL HALL AND DR. H. F. CAMPBELL, OF GEORGIA, U.S.

To the Editor of THE LANCET.

SIR,—I enclose a letter from Dr. H. F. Campbell, which will, I think, interest the readers of your valuable journal, in the columns of which the subject to which it refers was discussed a year ago.

I remain, Sir, yours very obediently,

MARSHALL HALL.

Blacklands Park, Calne, Wilts, May, 1858.

(COPY)

"Argusta, Georgia, U.S., Feb. 6th, 1858.

DEAR SIR,—I have recently collected into a volume certain papers of mine, under the title of 'Contributions to the Medical Association.' In writing this book I have taken great pleasure in rendering it a contribution also to the memory of your illustrious, lamented father, Dr. Marshall

Hall. The work is dedicated to him. I have ordered a copy to be sent, &c., &c.

I cannot, dear Sir, express the feelings of deep veneration and regard which I have ever cherished for the name of 'Marshall Hall.' His investigations in regard to the reflux function of the nervous system have been the spring and incentive to my every aspiration, from my earliest days to the present time. His name has become 'a household word' in my home, and indeed *everywhere* that the nervous system is studied.

Last year I saw in the London LANCET an article by your father, announcing a new function of the nervous system. It happened that I had been so fortunate as to have presented the same views previously. I wrote to him, presenting respectfully my claim of priority. Though labouring at the time under a most distressing affection, and within but a short time of his death, with that nobleness of soul which had ever characterized his actions, and which I confidently calculated upon, in throwing myself on his generosity, he promptly answered my appeal, and did me *ample justice* in the important question. His acknowledgment of my claim is my bulwark of defence. To him I owe the quiet possession of all the reputation and credit it may yield me, and his name must ever be associated in my mind with the most grateful and loving remembrances.

In this country the name of no European *savant* is more familiar and more honoured than that of Marshall Hall.

It affords us great pleasure to find that you are engaged in bringing forth his last great contribution to humanity and to science. The work will find a wide circulation throughout all this country.

I hope, my dear Sir, you will excuse the familiar manner, for a stranger, which I have assumed in addressing you. My only apology is, that I have ever felt *near* and familiar to everything which pertains to the great *guide* to the true philosophy of the nervous system.

I am, dear Sir, with great respect,
Your obedient servant,
HENRY F. CAMPBELL.

Marshall Hall, Esq."

ON THE TUBULAR TREATMENT OF STRICTURED URETHRAS.

BY A PROVINCIAL PHYSICIAN.

To the Editor of THE LANCET.

SIR,—I think I may, without any presumption, congratulate my professional brethren on the very superior advantages derivable from the novel mode of treatment adopted by Mr. T. Wakley for the relief—I may say cure—of a contracted state of the urethra; and as one fact is worth a thousand hypotheses, I cannot, in illustration, do better than state my own case.

I have been married twenty-four years, but previously to this period, and in days when passion and feeling in youth are too apt to usurp the throne of discretion, I unfortunately contracted violent gonorrhœa, which I have now no doubt (from improper treatment, particularly the use of stimulating and highly irritating injections) left the usual effects consequent upon specific inflammation of the mucous membrane—namely, thickening and contraction. Some fifteen years elapsed before I had the courage to seek relief, during which period the emission of semen was invariably attended with pain, and the urine escaped in a very small stream, with frequent desire to pass it. One of our first surgeons in the metropolis then endeavoured to pass No. 4 bougie and also catheter, but ineffectually, and each future attempt, persisted in for four months with instruments of various size, proved equally futile. At last retention of urine supervened, and with extreme torture the smallest catheter was introduced by another friend. From this date the attempt to discharge the contents of the bladder gradually became more distressing, and about two years since a second stoppage of urine ensued; this was again relieved after much perseverance by the smallest catheter. Three weeks since, the difficulty, accompanied by frequent desire of voiding urine, was so great and distressing, that, having lost confidence in the tedious, slow, and inefficient, with me, "bougie system," I called upon Mr. Wakley, and after satisfying myself by minute inspection of, and having had explained to me the precise mode of action of the instruments employed by this gentleman, that a vast improvement had been made in the manner of treating the disease—or, more strictly, effect of disease—called stricture, I placed myself under his care, and I now, thank God, that although *only* a period of seventeen days has elapsed, can pass my urine with a freedom hitherto unattainable, and in a full free stream, and I enjoy the exquisite blessing of being myself enabled to pass Nos. 9 or 10 silver catheters. The opinion of Mr. Wakley is, that a firm cartilaginous state of a portion of the urethra, fully one inch in length, has existed for a considerable time; but if he deem fit, he is at liberty to enter into detail of my case. Should any of the *profession* be sceptical as to the rapid, and, as I hope, permanent good effect on me, you are free to give my name and address.

I cannot, in conclusion, avoid making this important remark, that when once the "guide" has been introduced through the strictured part of the canal, it seems impossible to injure the lacunæ, or to make a false opening or passage by the subsequent process. This fact is one of such paramount importance, that it alone merits the highest and most attentive consideration.

I am, Sir, yours obediently,
A PROVINCIAL PHYSICIAN.

MR. CORNISH'S NEW ARTIFICIAL LEG.

To the Editor of THE LANCET.

SIR,—Having lately had occasion to have a wooden leg made for a sepoy of my regiment, the man having had his leg amputated below the knee-joint, the result of a wound received when bravely fighting against the mutineers from Sealkote, I tried the method recommended by Mr. Kenneth Cornish, in The Lancet, and am glad to say that it has fully answered. The only improvement that I would suggest on Mr. Cornish's plan is, that the spring foot should be a little shorter than the natural foot, and that the toe should be turned somewhat inwards.

I am, Sir, your obedient servant,
A. M. Garden,
Assistant-Surgeon, 6th Punjab Infantry.
Kohat, near Peshawur,
Feb., 1858.

MR. CORNISH'S NEW ARTIFICIAL LEG.

To the Editor of The Lancet.

Sir,—Mr. Garden's letter in your last number was, I need scarcely say, most gratifying and valuable to me, as being the testimony of a stranger, in a distant and disturbed land, to the soundness and practicability of the suggestions for Leg-making offered by me, in October last, to the profession. Though not openly attacked, I was met with the usual amount of private ridicule which rewards the propounder of any new doctrine. Though much surprised at Mr. Garden's great ingenuity in having accomplished so much with such very slight materials as were afforded him by my paper—for I well knew the difficulty of constructing anything of the kind for the first time,—I cannot accede to the propriety of the "improvements" suggested by him. His proposition "that the artificial foot should be a little shorter than the other" should be taken in two senses: Does he imply (1) that the *foot* should be shortened, or (2) the *leg?* In the first case, exception may be taken on the ground that "the greater the *span* of an arch (within certain limits), the greater will be the *strength* of that arch;" and, strangely enough, this proportion is exactly attained in the antero-posterior arch of the human foot: why, then, contravene Nature? In the second, I cannot only bring forward a case of my own, a child, where I am absolutely obliged to have the leg lengthened in consequence of the patient having grown since the measurements were taken, but must also assert that to shorten one leg, would, in course of time, induce spinal curvature. Mr. Garden's other suggestion, "to have the foot turned *inwards*," is most decidedly against mathematical and physiological laws as applied to progressional motion. Why he should desire to create an artificial club-foot I cannot imagine; and certainly, judging from the case just quoted by me, in which I found that it was necessary to have the foot set outwards at an angle of forty-five degrees, my practical experience, though confined, like his, to single case, leads me to form an opinion opposite to that set forth by Mr. Garden.

In my paper on this subject, I, oddly enough, forgot to mention the important fact that *the centre of motion of the ankle-joint is, in my leg, set up in the solid-metal or wooden centre from which the springs proceed;* whereas leg-makers have always tried to make an artificial hinge-ankle joint, aiming at the complex of the simple, and of course failing to attain their object. I likewise wish to state that my first two papers were simply meant to illustrate one manner in which the principles contained in my "New Theory on the Laws of Animal Motion," now being published in your valuable journal, may be practically applied to surgery; and that so far from wishing to claim *special* knowledge on the point, I have great dislike to "specialities" of any kind, and assuredly would never confine myself to the practice of so low and narrow a form of specialism as "orthopœdy,"—as its professors, with a truly *special* disregard to philological rules, term it,—much less to the supervision of "leg-making."

Since I have not "touted" for cases, I have only met with the one alluded to in my remarks on Mr. Garden's letter, but this is so interesting a one, physiologically, that I must request you to allow me, at some future period, to lay a brief sketch of its principal features before my professional brethren.

With many apologies for having thus far trespassed on your patience, I have the honour to be, Sir, yours, &c.,

Kenneth H. Cornish, M.R.C.S.
Chapel-street, May-fair, May 3rd, 1858.

EPIDEMIC SORE-THROAT.

To the Editor of The Lancet.

On April 17th, I was called on to see a young woman, aged twenty-four, who had left her service, in a respectable farm-house, on account of a sore-throat. I found her suffering from regular quinsy, which formed and discharged pus; but, at the same time, the entire fauces, soft palate, and uvula, were of a uniform intense dusky-red, and very painful. This condition yielded to treatment, and especially to free pencilling with solution of nitrate of silver. She returned to her place well.

On April 29th, I was called to see a little girl, aged four, in the same farm-house, who was just showing the incipient symptoms of scarlatina. By next day the disease was fully established in a mild form, with less affection of throat than usual; and this continued until about the end of the fourth day, when the throat suddenly became severly attacked with diphtheria, and, in spite of treatment, the child died of exhaustion and obstructed glottis on May 6th.

By this time the child's mother and aunt, both of whom had nursed her constantly, two female servants who had been with her, and myself, were all attacked with sore-throat of greater or less intensity, and with a considerable amount of constitutional disturbance. The inflammation, in every case, had its dusky-red character, and affected the tonsils and soft palate, extending on the latter, in every case, about a quarter of an inch, not further.

from the edge of the arch. In none of these cases was there either ulceration or exudation.

On May 9th, I was called to see the half-brother of the little girl who died. The boy, aged ten, had been removed to a house a mile distant immediately after his sister's disease had been declared scarlatina. I found him suffering from severe sore-throat, but not a symptom of scarlatina. Nor did the slightest symptom of that disease exhibit itself. He had, however, an alarming attack of "diphtheria," with excavations covered with ash-coloured exudations on each tonsil, and with fever of a low type. He ultimately got well under the use of nitrate of silver to the fauces, the constant use of a gargle composed of one drachm of the liquor of the chloride of lime to the half-pint of water, and seven-grain doses of chloride of potash, every six hours; beef-tea and milk diet.

Here we have quinsy, in the first instance, taking on the ideopathic character; next we have an isolated case of scarlatina, mild in itself, but converted into a fatal disease by the development of diptheria in a severe form. Further, we have five cases of diphtheria in adults, in a more or less severe from, traceable to the last-mentioned case; and lastly, we have a severe case of diphtheria fully developed in a child, traceable to the locality, but not to personal communication.

I must also add that in the adjoining village I have seen, since the above cases occurred, half a dozen cases of mild inflamed throat, with slight fever, not traceable to infection in any way.

I draw the following conclusions:—That we have had the diphtheritic influence, whatever that may be, epidemically present in the locality, ready to engraft itself upon any affection of the region it more specially attacks, but also capable of attacking independent of such affection, and also capable of communication by infection.

With respect to treatment, I should certainly recommend large and frequent doses of chlorate of potass, the chlorinated gargle I have mentioned above, and the free use of nitrate of silver. With respect to the latter remedy, I may mention that I always use the solution in pure nitric ether, as advised, I believe, by Mr. Stratin, and of the strength, of two scruples to an ounce. Personal experience is, perhaps, the best guide; and when my own throat was affected, I tried the solutions both in nitric ether and in water of similar strength. The nitric ether certainly acted with much more energy than the watery one, appearing not only to diffuse itself more freely over the affected parts, but to penetrate the mucous coatings more readily.

I remain, Sir, yours, &c.,
SPENCER THOMPSON, M.D.

Burton-on-Trent, May, 1858.

PEDICULI PUBIS.

To the Editor of THE LANCET.

SIR,—A patient of mine has for some time been troubled with pediculi pubis, for which numerous remedies have been tried, amongst which may be mentioned the mercurial ointment. All, however, have only mitigated the symptoms, without effecting a cure. Can any practitioner mention a more effectual remedy for this annoying complaint?

Yours, &c., MEDICUS.

June, 1858.

A NEW FORM OF STOMACH-PUMP.

To the Editor of THE LANCET.

SIR,—During a residence of several years in the Liverpool Northern Hospital, I have been very frequently called upon to use the stomach-pump, and have often felt that some method by which the stomach might with greater facility be emptied of its poisonous contents, or injected with water, would possess a great advantage over the instrument now in use. The latter is necessarily complicated in its mechanism, apt to get out of order, and slow in its action.

I have no hesitation in saying that we have in the action of the syphon a method so simple, yet so effectual, that no patient should for the future be lost for the want of the stomach-pump. I may observe that I have for some years been in the habit of using the ordinary œsophagus tube as a syphon to empty the stomach after it had been filled by the pump; but it did not occur to me until two months since that the same means might be used to fill as well as to empty it. I have with this object procured a vulcanized tube, one yard in length, which I attach to the ordinary tube. I have not yet had an opportunity of trying this upon the living; but have, with my colleague, Mr. Oldham, performed several experiments upon the dead with perfect success. A funnel may be inserted into the extremity of the elastic tube; in this case the water readily descends by gravitation. The gentle action by which the fluid escapes does not inflict any injury to the coats of the stomach. I would suggest, but have not yet tried, the same means for the purpose of giving enemas, injecting the bladder, and washing sores. It is possible that so obvious and simple a method may have been suggested to the profession; but my apology is, that I have not heard of it, and that since it is so effectual it certainly deserves to be generally known.

I am, Sir, your obedient servant,
WM. B WALL, Senior House-Surgeon.

Liverpool, May, 1858.

SIR BENJAMIN BRODIE AND THE ROYAL SOCIETY.

FEW, indeed, are the posts of honour which it falls to the lot of practitioners of medicine to fill. There is no instance in which one of them has been elevated to the peerage. Even in the Royal Society, it is remarkable, considering the many eminent members of our profession who have belonged to it, and have added such a lustre to it. Wollaston, Young, Jenner, and a host of others—with one solitary exception, there is no instance in which a president belonged to medicine—that exception was Sir John Pringle, who was elected to the chair in 1772, after a severe contest with Sir James Porter, whom Pringle defeated by a considerable majority. It is gratifying to announce that the Council of the Society have recommended to the Fellows Sir Benjamin Brodie as the future president. It is usual that the individual selected by the Council should be chosen by the Society We may, therefore, fairly congratulate the profession on the distinguished position which will shortly be holden by the most eminent member belonging to it. From a very early period of his career, the name of Brodie is most honourably associated with the transactions of the Society. It is not too much to say, that the choice of the Council could not have fallen upon any man more worthy of the honour they intend him. Sir Benjamin Brodie is not only a surgeon of the highest eminence, but a great philosopher. If medicine be honoured by the selection thus made, the Fellows of the Royal Society may be justly proud of a man to preside over their proceedings who has done so much in the cause of humanity and progress.

THE PROFESSION AND HOMŒOPATHIC QUACKS.

MEETING OF THE SOUTH MIDLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION,

Held at Bedford, May 21st, 1858.

Dr. Webster said he rose for the purpose of bringing under the consideration of the Association a circumstance that had recently occurred in the district of the South Midland Branch of the Association, which had created much excitement, and occasioned much discussion, both within and without the profession. Involving, as this matter did, medico-ethical considerations, and happening in the practice of two of the members, a full investigation into the circumstances thereof, and a decided opinion thereon, might justly be expected of that meeting; and before entering upon the subject, it might be desirable that those two gentleman, who were present to-day, should favour the meeting with authentic details thereof.

Dr. Paley said he should have pleasure in stating the facts of the case, which he believed was a very important one, and one in which any medical practitioner might be involved any day. The case was that of a gentleman living near Stamford, who was suffering from paralysis of the left side, and had previously suffered from similar symptoms, though in a much slighter form. He (Dr. Paley) had no doubt that there was some structural disease of the brain, and therefore did not think it right to adopt active treatment. Retention of urine did not occur till some days after, and then not from any disease of those organs, but as a consequence of the paralysis. Under the treatment prescribed, the patient appeared to him (Dr. Paley) to be doing well; but the wife of the patient, not being satisfied, had been very anxious from the first that Dr. Bell, a homœopathic practitioner, should be called in in consultation. Both Mr. Philbrick and himself positively declined to meet Dr. Bell if he came down, and in consequence of this refusal a telegraphic message was sent to Dr. Bell to put off his journey for some time. On Sunday afternoon Dr. Bell came down; and here in speaking of the conduct of others, he (Dr. Paley) would prefer to use only documentary evidence. In a letter to Mr. Philbrick, the lady says, "In answer to your letter and bill, I beg to say that I requested you and Dr. Paley to meet Dr. Bell on Sunday, Feb. 21st, which you both declined to do." In another part she says, "As soon as Dr. Bell saw the patient, he was much shocked, pronounced him in imminent danger, desired me to send for his brother, as his opinion was that he would sink in a few days from rhubarb, gentian, &c." He (Dr. Paley) had arranged to go again on Monday; but after Dr. Bell had seen the patient, a polite note was sent, explaining the circumstances, and declining his further attendance. From an accident this note did not arrive in time, and he (Dr. Paley) and Mr. Philbrick saw the patient together on the Monday morning, after Dr. Bell had left. The patient then required the use of the catheter; and before considering what further course they should adopt under the circumstances, they determined first to relieve their patient. This was done, and then Mr. Philbrick was requested to attend with Dr. Bell to perform the necessary operations. After consulting together as to what was the proper course for him (Mr. Philbrick) to pursue, he respectfully but firmly declined to have anything further to do with the case so long as Dr. Bell had charge of the patient. There had been much misrepresentation, but what he had stated were the simple facts of the case. Mr. Philbrick had been accused of "leaving the patient to die" rather than meet Dr. Bell, of having acted from temper, &c. He (Dr. Paley) was present when Mr. Philbrick declined, and he must say that he thought Mr. Philbrick had acted throughout the whole of this painful case with humanity and firmness. The patient was not left in an emergency, the catheter having been used before he left the house. More honourable conduct than that of his friend, Mr. Philbrick, he had never met with from any practitioner, and he thought he had been most harshly treated. After Mr. Philbrick declined, he received another letter from the lady, in which she says: "He (Dr. Paley) will be glad to hear that Mr. Jackson came without making the least difficulty, to perform the operation for the patient this morning, and has not the slightest objection to meet Dr. Bell, or acting under his directions, which, of course, makes Mr. —— very comfortable." In consequence of this intimation, he communicated with Mr. Jackson, who, in his answer, stated that he was in attendance upon the patient for the purpose of introducing the catheter. In the postscript he stated: "I have never yet seen Dr. Bell; but he and Mr. Fergusson are coming down from London to-night, when I shall have an interview with those gentlemen." In his last letter to the lady, he (Dr. Paley) remarked, "That the profession do not believe that infinitesimal doses of medicine have any effect in relieving true diseases, whatever supposed effect they may have over imaginary disorders; further, they suspect that many of those who profess to follow the system do not fully carry out their own principles, and are often obliged, in serious cases, to fall back upon legitimate medicine, and give efficient doses, though in a highly-concentrated form. (Laughter.) Regarding, then, the system as a delusion, if fully carried out, or as one involving an unworthy deception if evaded, they do not see how, with any regard to their own honour, they could take part in or sanction such a plan of treatment." With that letter closes the investigation. He hoped the members had come to the conclusion, that he and his friend had acted courteously, but firmly. (Hear, hear.) He should just like to call attention to Mr. Fergusson's letter. Mr. Fergusson stated that he accompanied Dr. Bell to Lincolnshire to see an urgent surgical case! But he (Dr. Paley) would say, that it was scarcely a surgical case at all, and certainly not an urgent one. In another curious letter from the lady, she says: "We did not send for Mr. Fergusson; Dr. Bell brought him." But the former gentleman says he does not consult with homœopaths; but if going down to Lincolnshire with Dr. Bell to see a patient, and meeting him and Mr. Jackson at the patient's house, be not consulting, he (Dr. Paley) did not know what was. The circumstances of Mr. Fergusson attending the case with Dr. Bell had left an impression on the minds of people in the neighbourhood that Mr. Jackson was justified in so doing. What possible reason was there for bringing Mr. Fergusson down at all? The case must have been extremely exaggerated on the part of some one; but the result of the investigation showed that the case was not of the character represented to Mr. Fergusson. He knew that attempts had been made to produce an impression prejudicial to Mr. Philbrick and himself, who were accused of having acted from pique, whereas they had been actuated by a sense of duty and honour.

Mr. Philbrick had nothing to add to the statement of Dr. Paley; and it would only be occupying their time uselessly if he were to make any lengthened observations. He felt he had to choose between his honour and his pocket, and he preferred retaining his honour. (Applause.)

Dr. Webster moved, in an able speech, the following resolution:—

"That it is the opinion of this meeting that no honourable man, whether physician or surgeon, can meet in consultation a homœopath, or, as such, act in conjunction with him."

After alluding to the unhappy alliance between Dr. Bell and Mr. Fergusson, he proceeded to show that when medical practitioners entertained a proper appreciation of their duties, those duties were never at variance with the welfare of their patients. He then went on to demonstrate what were the plain lines of demarcation between consulting with a homœopath, and officiating for him in a case in which life was threatened.

Dr. Barker seconded the resolution in a speech of much force and spirit, in the course of which he referred to the patronage of homœopathic quackery by a portion of the fashionable world, which constantly encouraged such delusions; and observed that the fallacy had nearly died out in the land which gave it birth. He also referred to the support, by some educated persons, of spirit-rapping and table-turning. He dwelt with peculiar force on the lamentable fact of many regularly-qualified practitioners following homœopathy, and showed that in all cases these men were deluded or deluders; he could not call to mind a single instance of a man becoming a homœopath who at the time had an extensive legitimate practice. He referred with great regret to the parts taken by Mr. Fergusson and Mr. Jackson in the case under discussion, and could see no justification of their conduct. He mentioned with much satisfaction the leading articles which appeared in the medical journals, and which deserved to be written in letters of gold. Dr. Barker concluded an eloquent speech by throwing out the following suggestions:

1. That every individual member of the medical profession should, in his own conduct, most jealously regard the honour of the entire body. Attention to this fundamental rule would be all that was required.

2. That a central and extensive *medico-ethical* association should be established for the purpose of framing a code of ethics adapted to the present condition of the profession. This would also constitute a court of appeal.

3. That petitions should be forwarded to heads of universities and colleges urging them to the judicious exercise of all the power they possess.

4. That the editors of the Medical Directories be requested to publish a list by itself of the members of the profession practising homœopathy, hydropathy, mesmerism, &c., instead of incorporating them amongst the true medical practitioners.

6. That resolutions on the subject be adopted by every meeting of medical men throughout the country, and forwarded to the medical journals for insertion.

Mr. Paget congratulated the meeting upon the amended resolution, which was a great improvement on the motion as it appeared in the circular calling the meeting. But he would even now venture to suggest that it was not sufficiently explanatory of their object. It appeared to him that the resolution should not only embody the sentiments of the profession, but it should distinctly state the grounds on which they based their opinion. He had drawn up a resolution which he would read to the meeting; it was as follows:—

"That so long as a system has no other philosophy than the jargon of 'similibus curantur,' nor sounder chemistry than the delusion of 'infinite dynamization,' it is degrading to a man of education to be connected with it. He, therefore, who consents to consultation with homœopaths, be they impostors or dupes, forfeits the respect of his professional brethren, and his membership of this branch of the British Medical Association."

The President agreed with Mr. Paget that they ought to give the public a clear idea of the why and because of the proceeding. He would suggest to Dr. Webster to embody the resolution of Mr. Paget in his own.

Dr. Richardson thought Dr. Webster's stood very well as an individual resolution; and would suggest that Mr. Paget's resolution be also passed in a substantive form.

Dr. Webster thought that, with a slight alteration, Mr. Paget's might be adopted as the first, and his own as a subsequent resolution; but he rather objected to the term "jargon" as too harsh.

Dr. Prior inclined to the opinion of Dr. Richardson, that the resolution ought to be passed separately. Mr. Paget's resolution stated the more general ground on which they pronounced an opinion condemnatory of homœopathy; and then Dr. Webster's resolution, as an expression of this meeting, would follow as a matter of course. With respect to the word "jargon," it had his entire approval; and he doubted whether any milder term would meet the facts of the case. He thought they would be consulting the interests of science by adopting both resolutions.

Dr. Barker thought that the two resolutions should be distinct; one referred to their own Branch, the other to the profession generally.

After some little discussion on the terms of both propositions,

Dr. Webster said, with the approbation of the members, he would adopt Mr. Paget's resolution, and transfer his own to that gentleman. He then read the second of the resolutions as given above.

Dr. Barker seconded the motion, which was carried by acclamation.

Mr. Paget then read the first of the resolutions given above, which he moved.

Mr. Terry seconded the proposition, remarking that he thought it necessary for the honour of the profession that such resolutions should be passed, and expressing a regret that so little notice of this form of quackery had been taken in the journal of the Association—*The British Medical Journal.*

This resolution was also carried by acclamation.

Mr. Marriott said the very honourable conduct of Dr. Paley and Mr. Philbrick was beyond all praise, and demanded an expression of approval from that meeting. He sincerely hoped that the profession generally would follow their excellent example. He could not but express his great regret at the annoyance to which they had been subjected. He would move a vote of thanks to those gentlemen for their honourable and straightforward conduct in the matter which had formed the subject of their deliberations to-day.

Dr. Williams seconded the motion, which was carried unanimously.

Dr. Paley briefly thanked the members for this cordial expression of their sympathy. The circumstances had made a strong impression in the neighbourhood; but he was quite sure that all candid persons must admit that he and his friend had honestly performed their duty. (Hear, hear.)

The President alluded to the fact of Mr. Fergusson accompanying Dr. Bell, and suggested whether the meeting would not be justified in passing a resolution on the subject. It appeared that there was not the slightest necessity for Mr. Fergusson's journey to Lincolnshire, and there was no doubt about the consultation.

Mr. Paget said Mr. Fergusson must have known that Dr. Bell was a homœopathic practitioner when he accompanied him to Lincolnshire, and yet he asserts in his letter that he does not encourage homœopaths. But he (Mr. Paget) would say that he did give encouragement to consult him, and it was a question whether they ought not to pass a resolution condemnatory of the conduct of Mr. Fergusson, and of the practice of meeting a homœopath under any circumstances whatever.

Dr. Richardson said Mr. Fergusson, unfortunately, was not the only prominent man who favoured homœopaths. It was exceedingly distressing to all honourable men, because, if it were not for the countenance homœopaths received from some men of their own profession, the public would not be duped in the way they have been. He was sorry that Mr. Fergusson should have allowed himself to attend to the representations of a homœopath; but if they passed a condemnatory resolution, it would be simply making a martyr of him, while the others could go scot-free.

Mr. Watkins doubted the propriety of passing such a resolution as that suggested by Mr. Paget; for if an urgent case occurred in his district, he doubted whether he would be justified in refusing to meet Mr. Fergusson, even after the passing of that resolution.

Dr. Paley feared it might lead to great difficulty.

Dr. Barker said he would give up his patient rather than meet anyone who avowedly met homœopathic practitioners. If a man wished him (Dr. Barker) to meet in consultation with another practitioner who encouraged homœopaths, he should refuse.

It was ultimately agreed that a copy of the resolutions which had been adopted should be forwarded to Mr. Fergusson and to Mr. Jackson. It was also agreed that they should be subscribed to by every approving member of the Branch, and forwarded for insertion in the weekly medical journals.

MEMORANDA ON THE STATUS OF THE ARMY MEDICAL OFFICER; AND ON THE SELECTION OF PLANS AND MODELS OF THE BEST BARRACKS AND HOSPITALS.

By J. Ranald Martin, F.R.S.

[We have selected from the Appendix to the Report of the Royal Commission on the Sanitary

Condition of the Army, the two following Memoranda, presented in evidence by Mr. J. R. Martin. Holding, as we do, that the main cause of the failures of the Medical Department is to be referred to its depreciated and depressed condition, we regard these suggestions of Mr. Martin's as containing matter of the highest importance, not only to the prosperity of the Medical Department, but to the welfare of the soldier.]

The present commander-in-chief of the Austrian army in Italy, Marshal Radetsky, has said: "The difference between officers as combatants and surgeons as non-combatants must cease. I see everywhere military officers and surgeons equally exposed to the fire, and therefore the surgeons shall enjoy advantages and distinctions in every respect equal to those of the officers."

The great Napoleon acted on this principle, and bestowed, on the field of battle of Wagram, the highest class of the Legion of Honour on Barons Larrey, Desgenettes, and Percy, declaring that such an act was a necessity in any plan which should pretend to give consistence to the system of recompenses granted by the state to its servants. He did not deem the question one which had need of discussion or of proof; the exclusions of former days, which banished hope and emulation from the minds of public servants, having been the results of the injustice of feudalism and of after ignorance.

The late Dr. Robert Jackson, the greatest physician that ever served in the British army, declared, on his experience of half a century of the most distinguished service, that "as the medical staff shares the fatigues and dangers of war, so in just reason it is entitled to a share of advantages." In this he represented the feelings and deeply-rooted sentiments of the whole medical department, and of the entire medical profession, of which he was so pre-eminent a member.

The Duke of Wellington said of officers generally:—"That those who do the duty of the army ought to be promoted, and ought also to enjoy its benefits and advantages."

The quotations here presented appear to me to impress a just view of an interesting and very important public question, and one which, if fairly carried out in practice, by the removal of all inequalities and distinctions,[*] would put an end to heart-burnings, chronic discontents, and feeling of depression, injurious alike to individuals and to the service at large; for whatever has a tendency to disappoint or repress a just and honourable ambition in public men, is sure in the end to prove injurious to the public interests.

It will not be contended that anywhere, even on the field of battle, the surgeon is of less importance than the captain or the major; in truth, the regimental surgeon is here of far more individual importance than either. As regards personal hazard, too, hardship, fatigue, privation, and death come by more ways to the surgeon than to the captain, and the surgeon knows it. "In just reason," then, there should be no distinction or difference whatever. For the good of the public service I am quite assured that there ought to be none such, and to render the medical corps an establishment of reliance for all purposes it must be raised to the position in the army which it deserves,—it must be made a contented service.

Lastly. The attempt on the part of governments to lead educated men to the highest point of excellence and of exertion by money alone is impossible of success.

(Signed) J. R. Martin.

Grosvenor-street, London,
November 12th, 1856.

THE JENNER MONUMENT.

On the 16th instant, the birth-day of the great Jenner, a numerous and highly-influential meeting was held at the College of Physicians to inaugurate his statue, to do honour to his memory, and to further the cause of vaccination. Prince Albert presided, and, on taking the chair, made a short address on the objects of the meeting. He eulogized Jenner as one of the greatest benefactors of his species; and characterized his discovery of vaccination, not as one of the happy chances of genius, but as the result of profound observation, of deep study, and of true inductive philosophy. He spoke of the beneficial influence which vaccination had exerted on all nations, and congratulated the meeting on the occasion of their assembling to inaugurate a statue to the memory of its great discoverer.

Dr. Conolly read an eloquent eulogium upon Jenner. He traced his career, and portrayed in a striking manner his simple early life, the difficulties with which he struggled in reference to his first attempts to promulgate his great discovery, the indomitable perseverance with which he pursued his labours, and the crowning success which followed.

A series of resolutions was passed, including votes of thanks to the sculptor, Calder Marshall, R.A.; the Committee for the erection of the Jenner statue; the Honorary Secretary; and the Chairman of the day. These various resolutions were carried amidst much enthusiasm, as was also a resolution respecting the benefits and efficacy of vaccination.

Dr. Seaton read an able and striking report on the present state of vaccination throughout the world.

Mr. Pettigrew spoke in glowing terms of the faithful likeness which the sculptor had succeeded in making of the great original; a success the more commendable and remarkable from the circumstance of his having received no assistance except from portraits.

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[*] Even in a matter so trifling as uniform, a proper consideration should be shown to the surgeon; for matters of this kind are noticed by the soldier. It has been justly observed that costume everywhere "aids at least the formation of first impressions; and it has already been found in more than one instance that the introduction of a distinguished uniform has conduced to the general elevation of the class to which it was assigned If the coat is an honourable one a man is careful not to disgrace it, and a respect for his profession becomes added to his respect for himself. A mean dress is, on the other hand, held to be a reproach, if not a disgrace." An appropriate uniform everywhere fosters *esprit de corps* and a sense of responsibility.

The meeting was also addressed by the venerable Marquis of LANSDOWNE, whose speech was received with great cheering. He had had the honour, nearly half a century ago, of proposing in the House of Commons a money grant to Jenner—a grant which was cheerfully awarded.

The proceedings altogether were of the most cheering and satisfactory character. The Chairman was supported by the Bishops of Oxford and Bath and Wells, Lords Ducie, Littleton, and Ashburton, the Lord Mayor, Dean Milman, and other persons of influence and station. The meeting was held in the library of the College, and about three hundred members of the profession were present. Special reference was made, in the course of the proceedings, to the assistance which had been rendered to the fund by America, and by most of the nations of Europe; France having given her aid, although a statue of Jenner is about to be erected in her own capital.

Mr. Marshall's statue is placed at the southwest corner of Trafalgar-square, immediately on the right of Sir Charles Napier. Jenner is represented seated in a chair, in an easy attitude. The fine, open, intelligent, and benevolent face of the original is admirably portrayed. It is to be trusted that this monument, the first erected in the metropolis to Jenner, may have the effect not only of rendering his face and name more familiar to the great body of the people, but, as was expressed by more than one speaker at the meeting, serve to impress upon the public mind the inestimable value of vaccination.

Obituary.

J. POCOCK HOLMES, ESQ., M.R.C.S.

AN American paper has reached us (through the kindness of Mr. J. O'Reilly, of Evansville), containing a very painful history of the death of a practitioner, of this metropolis, under circumstances of peculiar sadness. At the end of April, a helpless and afflicted stranger, past the age of eighty, was brought to Evansville, Indiana, by the steamer. One eye had been destroyed by cancer, the other was so far diseased as to be sightless. One leg was paralysed, and the poor sufferer seemed utterly helpless, destitute, and friendless. His destination, or last place of sojourn, were alike unknown. He lay unattended on board the steamer for a whole day, when a truly good Samaritan, Dr. A. C. Hallock, whose name we cannot inscribe here without offering to him the expression of grateful esteem and thanks, visited him and found him helpless, blind, suffering, and delirious. By intercession with a good old negro woman, a shelter in her hut, and faithful attendance, were procured for him. From this time his necessities were lovingly ministered to by Drs. Hallock and Casselberry. He knew well the desperate nature of his disease, refused medicines, and was thankful for care and quiet. In a few days he died. On examining his effects, papers were found which proved him to have been Mr. John Pocock Holmes, a member of the College of Surgeons, London. Certificates of ability and morality were found, under the hand of Sir Astley Cooper and other eminent men, and two gold medals, awarded for the invention of surgical instruments. There were letters from Captain Parry, the great Arctic explorer, couched in terms of friendly intimacy, thanking him for chemical services rendered, and speaking of an Admiralty grant of £150 in acknowledgment. Many other papers were found, which proved that Mr. Holmes had habitually moved in a highly respectable social circle. There are very many of our readers who will hold in their recollection the career of the unfortunate deceased in this metropolis. He became member of the Royal College of Surgeons in 1824, having previously seen service in the employ of the Hudson's Bay Company. He practised for many years successfully in Old Fish-street, Doctor's Commons. Mr. Holmes acquired a reputation for the invention of some obstetrical instruments, for which the gold medals alluded to were probably awarded. About 1840, becoming dissatisfied with changes that had occurred in his professional relations, he left for the United States, and, so far as we know, has been little heard of since. The writer for the *Louisville Journal* completes the sad history thus: "He appears at one time to have resided near Nashville, in Tennessee; and from other papers, we are led to suppose he has been residing recently with the community of Shakers, at West Union, not far from Bowling Green, in Kentucky. Whether he had just withdrawn from them when he arrived here, or why he should have left them in the afflicted and helpless condition in which he was found, is not explained by his papers, nor did he give those who took care of him any explanation before his death; neither did he give them any account of himself, nor tell of the strange vicissitudes by which he, in his old age, had been cast among strangers, a homeless, and friendless wanderer. In his last moments he spoke of a sister, but gave no clue to her name or residence. Before his death he committed his funds, which he had kept concealed about his person, amounting to about 250 dollars, to Dr. Hallock, but left no instructions in regard to the disposal of them. His other effects were of little or no value. His estate will be duly administered upon and after the expenses are paid, the balance will be sent to his friends. He was evidently a man of correct habits and great intelligence. By what misfortunes he who had enjoyed high professional reputation, and had been the associate and friend of eminent men, was left homeless and poor, and died at last alone, in the shanty of a poor negro nurse, is unknown."

News Items, Medical Facts, &c.

PHTHISIS.—At the Imperial Academy of Medicine, Paris, on May 4th, M. Velpeau laid upon the bureau a work by Dr. M'Cormac, "On the Nature, Treatment, and Prevention of Consumption, and incidentally of Scrofula." According to Dr. M'Cormac, the material cause of phthisis is the accumulation of carbon in the blood. The author relates experiments made upon a certain number of dogs (rabbits?), of which half were left in the open air, and half were left in an atmosphere loaded with carbonaceous matters. The latter half became phthisical in six weeks. Dr. M'Cormac's work, which is in English, was referred for examination to MM. Barth and Cloquet. —*L'Union Médicale, May 6th*, 1858.

THE PRIZE FOR THE MOST USEFUL APPLICATION OF VOLTA'S PILE IN FRANCE.—It may be recollected that the Emperor of the French, by a decree dated February 23rd, 1852, founded the above mentioned prize of £2000, to be awarded five years after the date of the decree. On the 7th of February, 1857, a committee composed of the *élite* of the scientific men of Paris, was appointed to examine the claims of the candidates; and after protracted and most careful investigation, the committee have expressed the opinion that none of the improvements submitted, though some presented a considerable degree of merit, came up to the requirements which would justify the award of the prize. Upon the request of the committee, another delay of five years has been announced. Marks of high approval were, however, bestowed on M. Froment and M. Duchenne (of Boulogne) in the shape of medals, the latter gentleman obtaining, besides, the cross of the Legion of Honour. The Secretary for Foreign Affairs, Count Walewski, was also requested to take favourable notice of the scientific achievements of the two foreign gentlemen, Messrs. Ruhmkorff and Mettlesdorff, who had competed for the prize.

ACADEMY OF SCIENCES, PARIS.—THE PARIETAL ANGLE; ANATOMY FOR ARTISTS; DIACLASTIC AMPUTATION.—At the last meeting, M. de Quatrefages described a goniometer of his invention, for measuring the parietal angle, or angle formed by the tangents drawn to the parietal bones. The importance of this angle as an element of distinction in ethnological divisions of the human race is very great, but the difficulty of measuring it has hitherto prevented its application to that purpose. The instrument consists of two movable branches and a graduated semicircle, with other contrivances for reading off the angle conveniently. The head to be measured is placed between the two branches: when the distance between the two zygomæ is larger than that of the two parietal bones, M. de Quatrefages calls the angle *positive*; in the contrary case, *negative*. The positive angle, the only one hitherto considered by ethnologists, is always very large in the yellow races and those which are derived from them. It attains its maximum in the boreal and amongst some tribes of South America. It is negative in the fœtuses of all human races, and in some adult individuals of the white race. A man of forty-six had an angle of 18°; and a young man of twenty-five, one of 22°. M. de Quatrefages thinks that the variations of the parietal angle admit of a range of about 36°. M. Larni presented the Academy with a statue in which the muscular system is displayed in a novel way for the advantage of artists. M. Larni's efforts are especially directed to the solution of the difficult problem of affording artists exact representations of the muscles as they exist in the living subject, instead of those now in use taken from the dead body. M. Maisonneuve read a paper on a new method of amputation, which he calls the *diaclastic* method. It consists of a contrivance for fracturing the bone at the precise point required; after which the muscles are strongly compressed by mechanical means, so as to reduce them to a small diameter. They are divided, and the member separated from the trunk. In consequence of the compression, all hæmorrhage is effectually prevented. M. Maisonneuve quoted six cases of amputation by this astonishing procedure—five of the leg and one of the arm; in all of which complete cures were effected. No unsuccessful cases, he says, have occurred to him.

PROFESSOR MÜLLER.

PHYSIOLOGY has lost one of its most ardent and successful cultivators by the lamented death of Professor Müller, of Berlin. This melancholy event occurred suddenly, at the early age of fifty-six. Belonging to a family already illustrious by its splendid contributions to science, he has added lustre to its hereditary fame.

L'Union Médicale announces the death, at Venice, of Professor Mauthner, director of the Hospital for Children; of Professor Plattner, at Fribourg; and M. Mareska, at Ghérist. These are all eminent names in our profession, and their loss cannot be regarded without pain and regret.

BIRTH OF A HIPPOPOTAMUS IN PARIS.—At the meeting of the Academy of Sciences on the 10th of May last, M. Geoffroy St. Hilaire stated that a young hippopotamus had been born that very morning at the Menagerie. Although several meetings had been observed on the part of the male and female hippopotamus, it was not thought that parturition would take place so soon; it was not even certain that gestation was going on. The abdomen had not visibly enlarged, and the mammæ had not become more conspicuous than before. At the moment of parturition, the female took her position at the side of the pond, the head and neck out of the water, the rest of the body submerged. The cub was therefore born in the water, and began immediately to swim about. He very soon thrust his nostrils and mouth out of the water, the former already armed with the valves which close these apertures at the will of the animal. After having breathed for a few seconds he plunged again and swam about, going regularly round the pond. This young hippopotamus was born strong and robust, and at the normal period, his voice being so strong an hour after his birth, that people mistook it for that of the parents. M. St. Hilaire mentioned further "that the cub would probably not live; he does not seek the mammæ of the mother, and he does not follow her; it is the mother, on the contrary, who follows him, but she fails to take proper care of him." The cub, already somewhat weakened, was therefore placed in an adjoining pond, to be artificially fed. He took the goats' milk which was offered to him, very well, but did not look as if he were likely to live. He died the same afternoon, and a cast was immediately taken by M. Poortman. The animal's vascular system was also injected with an antiseptic fluid, so as to allow dissection to be carried out in a complete and deliberate manner.

A Homœopathic Lawsuit in France.—It appears that twelve homœopaths, practising in Paris, have brought an action against the journal called *L'Union Médicale*, for an article written by Dr. Gallard, and which puts the delusion in its proper light. The damages are laid at £2000.

A Gold Medal has been presented at New York to Mr. Frederick H. Rose, assistant-surgeon in the Royal Navy, for professional assistance offered to the fever-stricken crew of the United States ship *Susquehanna.*

Monuments to Jenner.—It is a notable fact, that in London, where the charms of a pretty face are so much appreciated, especially amongst aristocratic circles, that even there Jenner's name has been but seldom mentioned since his decease, thirty-five years ago. It has not been so in some other lands, for in the year 1821, a handsome monument to Dr. Jenner stood in the great square of Guatemala, a magnificent city in Central America. It is the capital of the state of that name, and, has, or had at the above date, a population of 50,000 souls. The city stands about 8000 feet above the Pacific Ocean, on the western slope of the Andes, and contains an ancient and distinguished university. There the name of Jenner was honoured and revered, even during his lifetime, as a benefactor to his species, and more worthy of a niche in our esteem than many of those who have been lauded as the conquerors and destroyers of mankind.—*Glasgow Herald.*

The Reward of £4000 to the Discoverer of an Undoubted Remedy for, or Prophylactic of, Cholera.—Our readers will recollect that the late M. Bréant, a man of fortune who lately died in France, left the sum of £4000 to be handed over to the discoverer of a remedy or prolactic respecting cholera. The Academy of Sciences of Paris, which has been entrusted with the examination of the candidates' claims, has just received the report of the committee appointed for the purpose. From this document it appears that 153 essays were sent in, and none of them were thought worthy of the full reward, nor of the partial gratuity of £200, being the interest of the £4000. Two pamphlets, however, fixed the attention of the committee: the first is by the head-surgeon of the Smolensk Hospital in Russia, and the second by an author, simply styled Mr. R. The Russian writer views cholera as analogous to typhoid fever and small-pox: he, therefore, vaccinates all the cholera patients at outset of the epidemic. This practice was recommended to all practitioners of the empire by the Russian Government, and is said to have saved six patients out of seven! Mr. R.'s essay extols the use of calomel, given in doses of from two to three grains every two or five minutes, the author stating that as much as thirteen drachms can be taken in a short time without salivation. Mr. R. maintains that his cures are eighty per cent. This latter practice, it will at once be seen is almost identical with that so energetically recommended by Dr. Ayre, of Hull.

Death by the Inhalation of Chloroform in Paris.—A patient, who was about to have a testicle removed at the Military Hospital of Gros Caillou at Paris, died a few days ago from the effects of inhalations of chloroform before the operation was commenced.

Chlorate of Soda as a Substitute for Chlorate of Potash.—M. Guéneau de Mussy states, in the *Revue Médicale*, that, struck by the little solubility of chlorate of potash, he substituted chlorate of soda for it, as the latter salt is much more soluble than the former. The taste of the chlorate of soda is, besides, less disagreeable than that of the other salt, and can also be given in a small quantity of vehicle. M. de Mussy has given the chlorate of soda in several cases of diptheria with uniform success.

Sleep-Walking: Parricide.—The son of a German farmer lately shot his father dead whilst partially waking from sleep-walking. The unfortunate parent had entered his son's room at night, and having partially woke him, the latter, fancying the house was broken into by thieves, seized a gun hanging by the bed, and destroyed his father. The brother of the same somnambulist had, several years previously, narrowly escaped death by sabre cuts under nearly similar circumstances. The court before which this sad affair was brought acquitted the prisoner.

Extreme Old Age.—There are certainly more things in old age than are dreamt of in our philosophy. Flourens says man is naturally a centenarian, who may double his term of life. "Old Parr" died by accident, sound, hale, and hearty, at the age of 152. The fact rests upon the most competent testimony possible—the public and scientific report of Dr. Harvey, the discoverer of the circulation of the blood, and the founder of the science of ovology. And the other day one James Nolan is reported to have died in Ireland at the age of 115 or 116 years. Now, very important physiological, moral, and social results would, we suspect, be obtained were cases of this kind made the subjects of scientific investigation by competent physical and metaphysical students. The following are the facts as recorded in the newspaper paragraphs:—Mr. James Nolan died April 24th, 1858, at Auchindrane, Carlow, Ireland, having reached the age of 115 years and nine months. All his faculties were preserved to him until his death, his sight being nearly perfect, and only his hearing defective. There is something more interesting in these facts than his being the oldest subject of her Majesty, having lived in the reigns of five sovereigns of England. No doubt it is curious to be carried back by two lives—Mr. Nolan and his father—to the reign of Charles II. and almost to the time of Cromwell. But Mr. Nolan, in as far as longevity is concerned, is the most extraordinary specimen of the hominal species in our times and island. And very useful hints for the guidance of human life might be obtained from the complete investigation of the facts of the lives of men and women like him. The means, moreover, of satisfying a wholesome and useful curiosity exist in the case upon the spot; for it has been well said, all human knowledge is represented in every village or parish in which there reside a clergyman, a lawyer, and a doctor. The lawyer could tell us the proofs which establish the birth of Mr. James Nolan in 1742; the doctor could describe to us his constitution, habits, diet, and precautions; and lastly, the clergyman could give us an account of his moral dispositions—the most important consideration of all in regard to longevity. The remarks we have made upon the case of Mr. James Nolan apply equally to the case of a woman, who, according to the report of the Registrar-General for the first quarter of this year, died the other day at Cawdor, in the county of Nairn, at the age of 110 years.—*Glasgow Mail.*

New Medical Papers in France.—The south of France has lately been very prolific as regards the birth of medical papers. At Montpelier one has been started with the name of *Montpelier Médical;* and farther south, another, with the title of *La Presse Médicale de Marseille.*

The Effect of High Temperature on the Intestinal Canal in Paris.—The *Gazette Hebdomadaire* says that diarrhœa has been very prevalent in Paris since the setting in of the heat; and it appears, on particular inquiry, that most of the persons attacked had refrained from fruit.

Academy of Sciences, Paris.—The Diseases of Quinine-Makers; Lobelia Longifolia a Sedative.—M. A. Chevallier, at the last sitting, communicated a paper on the diseases to which workmen employed in the manufacture of sulphate of quinine are subject. It appears from his statement that one of the disorders is a cutaneous affection severe enough to force them to suspend work for a fortnight, a month, or sometimes altogether. M. Chevallier further quotes M. Zimmer, of Frankfort, to testify to a particular kind of fever-bark fever (das China Fieber,) which affects workmen engaged in pounding bark. This has not yet been observed in France. It is described as so painful that those who have once suffered throw up employment rather than risk a second attack. As for the cutaneous affection, it attacks not only workmen but those about the place, and affects alike the sober and the intemperate. No remedy has as yet been discovered. M. Bandelocque announced that he had used lobelia inflata with advantage as a sedative in the cases of a young idiot, who, when angry, showed a disposition to bite, and of a deaf boy with the same tendency. He further stated it as his belief that a plant of the same family (lobelia longifolia) was used as a sedative in the feats of horse-taming which now engage public attention.

Baron Philippe Boyer, Surgeon to the Paris Hôtel Dieu, of Paris, and son of the eminent Boyer, whose surgical works are so well known throughout Europe, died lately, aged fifty-seven.

Alimentation of Birds.—M. Florent Prevost, naturalist to the Museum of Natural History, Paris, has made a careful study of the alimentation of birds; in the course of which he has obtained and preserved the stomachs of a large number of species, taken at all periods of the year, and at various ages. He concludes that their services in the destruction of noxious larvæ and insects far counterbalance any injury to the crops, and that all are more useful than injurious to mankind. He deprecates strongly the war which is commonly waged against many species.

The Physical Degeneracy of the French Race.—The *Patrie* contains a long article on the decrease of the population of France, and on the decline of the physical powers of the inhabitants. It attributes this result to the insufficient food of the working classes, and to the discredit into which gymnastic exercises have fallen. This is especially noteworthy, since the same journal united with its compeers lately in vigorously rebutting a similar statement made on this side of the channel.

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☞ *The Proprietor of this Reprint had a portion of* Dr. Brown-Sequard's Lectures *prepared for the present Number, when he was notified that the Lecturer (a citizen of the United States) had taken out an American copyright for the same. The author is at present in Paris, but his acting Agent here has written for his consent to its appearance in this Journal previous to publication in book form. It may shortly be expected.*

MR. WAKLEY, M.P., EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, JR., SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

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A PRACTICAL

Course of Lectures

ON URINARY DISORDERS;

EMBRACING THEIR

DIAGNOSIS AND MEDICAL TREATMENT.

Illustrated by numerous Engravings, displaying the Principal Forms and Modifications of Urinary Deposits.

By A. H. HASSALL, M.D., F.L.S.,

PHYSICIAN TO THE ROYAL FREE HOSPITAL, AUTHOR OF "FOOD AND ITS ADULTERATIONS," ETC.

ON UREA.

Source of Urea.

It is utterly impossible that we can possess any correct knowledge of the pathology of urea, and, indeed, of any of the other constituents of the urine, until we are acquainted with the source or sources whence they proceed.

One source of urea, it has been clearly ascertained, *is in the nitrogenized tissues of the body*, but whether the albumen, fibrin, or gelatine all yield this substance, and, if so, whether they furnish it equally, has not yet been determined with any degree of precision. Dr. Prout inclined to the opinion that urea is the peculiar product of the metamorphosis of the gelatinous and uric acid of the albuminous structures. The inquiries of Bischoff afford some support to the views of Dr. Prout, since he has ascertained that the consumption of gelatine greatly increases the amount of urea voided.

Liebig believes that uric acid is first formed from the nitrogenous tissues, and that the urea is produced from it, this change being due to the action of oxygen and water, during respiration, on the uric acid. There are some facts which throw considerable doubt upon the correctness of this view. In birds and many insects the uric acid does not become converted into urea, but is expelled in the form of urate of ammonia, and yet, in these the conditions exist most favourable for the conversion of the uric acid.

Lehmann remarks: "The urea is possibly only excreted in increased quantity when material for its formation is sufficiently supplied; now if polyphagia be not combined with this urea diathesis, *the source of the urea must be sought in the waste or consumption of the nitrogenous tissues.*"

Again, at p. 155, we find these observations by Lehmann, in regard to the source of urea: "In the present state of our knowledge, we may answer that the urea is formed in the blood, and that it is produced from materials that have become effete, the detritus of tissues, as well as from unserviceable and superfluous nitrogenious substances in the blood. No animal tissue presents such vital activity, is so much used, and so rapidly worn out as muscular tissue; it is in this tissue that the metamorphosis of matter proceeds most rapidly and abundantly, and yet, in the large quantities of muscular tissue on which Liebig worked, he could detect no trace of urea, although he found substances from which he could produce urea artificially. We must assume, therefore, that these substances, as creatine, and probably inosic acid, are decomposed in the blood by the action of the alkalies and of free oxygen into urea and other matters to be excreted. Moreover, my experiments showing that the superfluous nitrogenous food which enters the blood, and the fact that caffeine, glycine (Horsford), uric acid, and alloxantin (Wöhler and Frerichs), soon after they have been taken, perceptibly increase the amount of urea in the urine, support the view that urea is formed in the blood. It is impossible to suppose that this nitrogenous food is first converted into tissue and subsequently into urea, &c.; for we cannot think that a process occurs here analogous to that exhibited by the percussion apparatus of physicians, where a certain number of parts effecting a percussion, give rise to the repulsion of an equal number of parts. Hence the conversion of this matter can occur in no other place than in the circulating blood, and therefore it is here that the urea must be formed."*

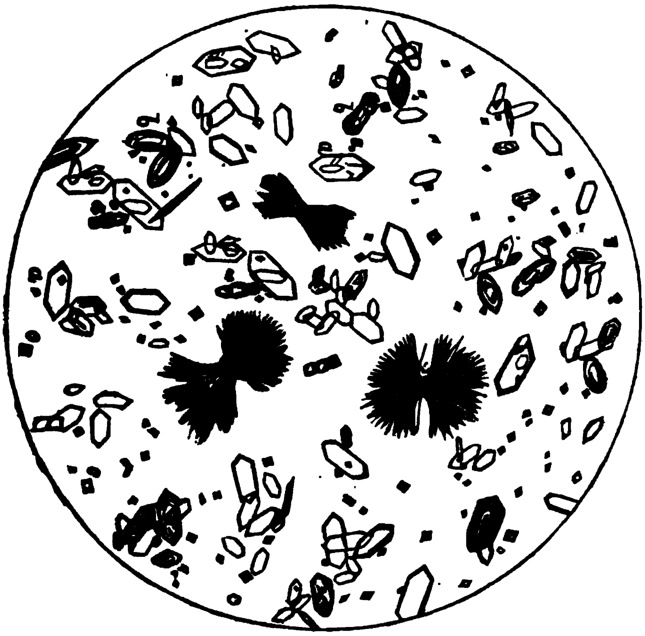
Alloxan and alloxantin taken into the stomach not only do not pass into the urine as such, but are probably changed in the blood into urea, since after taking them much urea is found in the urine.

Notwithstanding the doubtfulness of Liebig's views, there is great probability, as will be shown hereafter, that much of the urea formed does really result from the decomposition of uric acid.

The fact that waste of tissue increases the amount of urea, is sufficiently proved, first, by the results of increased bodily exertion, as recorded by Lehmann and Hammond; secondly, by the occurrence of urea in the urine after greatly prolonged abstinence from food; and thirdly and lastly, by the results of direct observations made in certain diseases.

A second and, indeed, principal source of urea is in the food consumed. This fact appears to be conclusively demonstrated by the researches of Lehmann and Bischoff, already quoted, who found a very large increase in the urea excreted after a nitrogenous diet, and a very great decrease after a non-nitrogenous diet. On this point, however, a difference of opinion exists, Liebig and Bischoff believing that the urea proceeds in all cases from the disintegration of the tissues.

FIG. 24.



Crystals of OXALATE OF UREA, with OXALATE OF LIME, from human Urine, after a dose of bin-oxalate of potash. (Magnified 220 diameters.) 1852.

But by what process does this formation of urea take place. To this no certain reply can yet be given. Chemists explain its formation somewhat after this manner: "The oxygen of the blood, in passing through the capillaries, destroys by a true combustion, the tissues become unfit for life, the carbon and the hydrogen of these tissues go at least, in part, to become transformed into carbonic acid and water, to be rejected by the lungs. But what form does the nitrogen take? The most simple combination which it can form is ammonia; this gas not being able to exist in a free state in the economy, Nature requires to modify it. It is sufficient for that end to put it in relation with the carbonic acid, and to eliminate from this combination the elements of water to transform it into urea. This principle being inert, and soluble in water, may pass without the least danger into the torrent of the circulation, and be rejected by the kidneys."

Or, according to another hypothesis, urea "is derived manifestly from the oxydation of the nitrogenous materials of the blood, and their tendency to become converted into cyanic acid and oxyde of ammonium products of such an order, that to get rid of them it would be necessary to burn their elements, and to give rise to nitric acid by the combustion of the nitrogen itself. But there would have resulted a great transformation of oxygen, for a production of heat, very feeble, or even none. The operation was, then, useless; nature had avoided it. The combustion of azotized matters is arrested when they are converted into cyanate of ammonia, which is itself transformed immediately into urea by an isomeric change as fast as it is produced."*

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* Day's Translation. American edition.

It must be understood that the preceding hypotheses or theories, although highly plausible and ingenious, and no doubt, to some extent, correct, are yet founded entirely upon theoretical and chemical reasoning, and not upon direct observation, and therefore they must not be allowed to have the force of established truths.

It is very certain that it is not in the kidneys that the urea is formed; this position is sufficiently proved by the fact that the urea goes on accumulating in the blood after the extirpation of those organs. The kidneys serve, therefore, simply as the channels through which the urea is excreted.

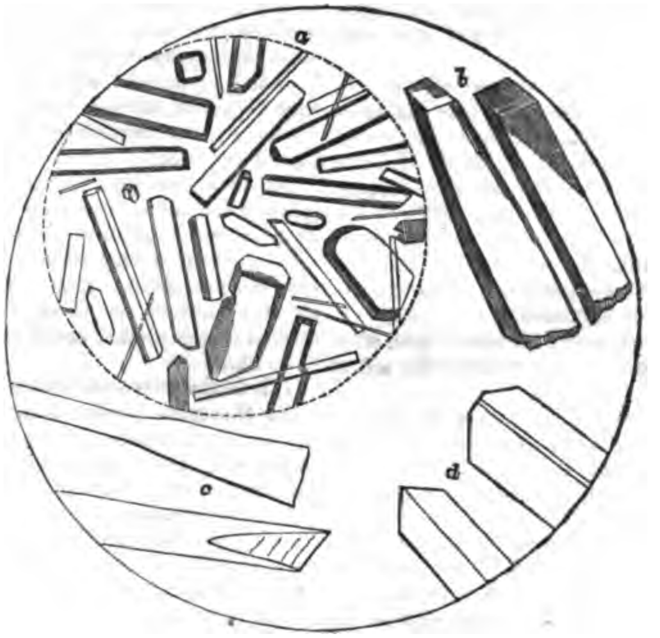
It has been further established experimentally, that after the removal of the kidneys, not only is the quantity of urea in the blood increased, but that it escapes in great part into the intestines by their mucuous membrane, becoming speedily, on its arrival there, transformed into carbonate of ammonia.

Although the urea begins to increase in amount from the first moment of the extirpation of the kidneys, it is only at the end of the third or fourth day that the increase becomes very manifest.

Chemical Characters of Urea.

Urea exists in the urine simply in a state of solution, and usually in the uncombined form. The only definite chemical compounds of urea which have hitherto been ascertained to be present in the urine are those with chloride of sodium, chloride of ammonium, and oxalate of urea, formed after taking a large dose of binoxalate of potash; on the other hand, it has been determined that urea will not form compounds with sulphuric, hippuric, lactic, and uric acids.

Fig. [illegible]



Crystals of Urea. *a*, formed by slow evaporation, (Lehmann.) *b b*, from Atlas of MM. Robin and Verdeil. *c c*, Extremities of needle-like crystals of urea, showing tendency to assume a regular crystallized form. *d d*. Crystals of urea, chloride of sodium, of frequent occurrence in human urine.

Like most of the other organic constituents of the urine, it is a strictly excrementitious substance, and, in consequence of the large quantity formed, it is probably the most important of all the constituents of the urine, although hitherto it has been so little studied pathologically.

Urea dissolves in its own weight of water with evolution of heat; in hot water it dissolves in every proportion; it is soluble in four parts of cold and two of warm alcohol; it is insoluble in ether, if anhydrous, and free from alcohol; it exerts on action on the vegetable colours; it fuses without change at 120°, but a little above that temperature it begins to give off ammonia, and to change into cyanuric, and when heated rapidly it yields also cyanic acid, produced from the previously formed cyanuric acid. Neither the metallic salts, tannic acid, nor any other reagents precipitate urea from its solutions. On treating a solution of urea with nitrate of silver, cyanate of silver is thrown down, while nitrate of ammonia remains in solution. By nitrous acid urea is decomposed into nitrogen, water, and carbonic acid;

---

* Chemie Anatomique et Physiologique, vol. ii., p. 507.

and by chlorine into nitrogen, carbonic acid, and hydrochloric acid.

Urea is composed of two atoms of carbon, oxygen, and nitrogen, and four atoms of hydrogen. Its atomic weight is 750·0.

Urea may be artificially prepared in a variety of ways; not only is it a very common product of the decomposition of natural organic bodies, but also of artificial substances. We may here refer to its formation by the union of cyanic acid and ammonia, of cyanogen and water, of sublimate of copper and hydrosulphate of ammonia, in the decomposition of allantoin by nitric acid, of creatine by the alkalies, and of alloxan by a boiling solution of acetate of lead.

Urea is readily converted into *carbonate of ammonia* by a variety of circumstances. Some years since—namely, in 1852, I instituted some experiments with a view to determine more fully and accurately than had then been done, the conditions which regulate the conversion of urea into corbonate of ammonia.

The principal conclusions arrived at were as follow. They will be found more fully stated in THE LANCET for June, 1852, and in my Review of the 4th Edition of Dr. Golding Bird's Urinary Deposits, contained in the *British and Foreign Medico-Chirurgical Review* for July, 1853.

1st. "The simple act of boiling an aqueous solution of urea is sufficient to determine the gradual dissolution of that substance, and its conversion into carbonate of ammonia.

2nd. "This conversion of urea takes place, after a time, in distilled water, even without the aid of the spirit lamp.

3rd. "The decomposition of urea is effected either with or without heat, much more readily in fluids which are alkaline, and especially in those the alkalinity of which arises from the presence of lime in any form.

4th. "The converson of urea is retarded, and sometimes altogether prevented, by an acid condition of the fluid in which it is present; and this is equally the case whether the solution be subjected to the heat of the lamp or not. The more acid the fluid, the more does it prevent the decomposition of the urea.

5th. "Animal or nitrogenous matter, in a state of decomposition, exercises a powerful influence over the transformation of urea; and this it does partly by producing an alkaline condition of the fluid in which the two substances are contained, the alkalinity being produced by the carbonate ammonia generated during putrefaction."

Microscopical Characters of Urea.

Some years since, I showed that when a drop of any urine containing urea in any considerable amount is evaporated on a slip of glass, a glistening crystalline crust, more or less dense, is felt, formed of needle-like crystals of urea, arranged in more or less of a radiate or arborescent form, as exhibited in Fig. 11. (THE LANCET for February.)

If these crystals be closely examined, a prominent ridge will be observed running down many of them, while the distal extremities of some of the needles assume the shapes exhibited in Fig. 25, *c c*, showing a tendency to take on a regular and defined crystalline form. Again, when pure urea is evaporated on a slip of glass, the needle-like crystals forming the edge of the crust frequently break up into short crystals, of irregular shape, but some of a wedge shape. I have met with similar crystals, more perfectly shaped, in the evaporated extracts of urines. Indeed, under certain circumstances, especially when slowly evaporated, urea does crystallize in a definite form, that of the rectangular or right rhomboidal prism. The regularly-formed crystals are usually met with in the shape of flat four-sided prisms, often full of cavities, and appearing to be formed of numerous parallel crystalline lamellæ, the prisms being terminated at the ends by one or two oblique surfaces. According to C. Schmidt these forms do not pertain to the monoclinometric system, but rather to the hemihedral form, belonging to the rhombic system, and bounded by parallel surfaces. In the engraving (Fig. 25), the various forms are delineated assumed by the crystals of urea, as observed by myself and others.

Not unfrequently, the needle-shaped crystals forming a crust of urea after the evaporation of a drop or two of urine on a slip of glass, are themselves beset in a very curious manner with other crystals, probably of creatine, and regularly placed at right angles, as though they had become formed and deposited under some electric agency. (Fig. 22.)

It is in the evaporated extracts of urine that we meet the more perfect forms of the crystals of urea. The crystals of urea when not pure, and mixed with the chloride of sodium, readily deliquesce, and therefore easily lose their form.

The evaporation of one or two drops of urine on a slip of glass affords one of the readiest and most satisfactory means of determining whether urea is present in excess or not in any urine.

The presence of urea modifies the form of the crystals of chlorides of sodium and ammonium: thus the former salt is said to crystallize in octohedra instead of cubes, and the latter in cubes and not in octohedra. In some experiments I have made, I have not found this to be the case; but the crystals of the compound urea and salt have been in the form of four-sided prisms and plates more or less broad and long, variously truncated and mostly united together, so that usually one extremity of each crystal only is perfect. (Fig. 25, *d d*.) The form in which the urea itself crystallizes is influenced as much as those of the salts with which it is in combination.

The combinations of urea and salt have a definite composition, the proportions being one equivalent of urea for one of the chloride and two of water. The combination with chloride of ammonium is analogous. The crystals of urea and salt differ from those of pure salt in not, like the latter, polarizing light; they may be formed artificially as by adding salt to the urine; they are soluble to a considerable extent in alcohol and ether.

There are some substances occasionally present in the urine which interfere considerably with the crystallization of the urea, and the removal of which is thereby rendered necessary: one of these is albumen, which may be removed by boiling, a little acetic acid being added, to ensure the more complete precipitation of the albumen, and to prevent the decomposition of the urea; another is bile, in cases of jaundice; this may be precipitated by means of acetate of lead. If sugar be present, it must not be removed by fermentation, as the urea will be transformed as well as the sugar.

Urea forms crystallizable and but sparingly soluble salts with certain acids, as the nitric, oxalic, tartaric, and some others, and, consequently, it is very frequently separated from the urine in the form of one or other of these salts, and its quantity determined from them. The microscopical characters of the nitrate and oxalate of urea are particularly well-marked.

The treatment of the urine necessary for the formation of *nitrate of urea* has already been explained, but the nitrate may be formed on the small scale for observation with the microscope. Thus, a single drop of urine may be placed upon a glass slide, and a part of a drop of nitric acid added, when, if urea be present in anything like considerable amount, crystals of the nitrate will speedily appear. The crystals occur in flat rhomboidal or rectangular plates, often six-sided and generally longer than broad, the angles being variously truncated, and the crystals often being compound and frequently aggregated into masses. (Fig. 23.)

Oxalate of urea may not only be prepared artificially, but it may occur ready formed in the urine. The engraving (Fig. 24) represents some oxalate of urea found in the urine after a large dose of binoxalate of potash. The mode of crystallization of this salt of urea is sufficiently remarkable to allow easily of its discrimination from the nitrate.

The forms assumed by the crystals of oxalate of urea are all derived from the rectangular and right rhomboidal prisms. Like the other oxalates the crystals often assume a dumb-bell shape. (Fig. 24.)

For a full description of the various modifications presented by the crystals of oxalate of urea see "Traité de Chimie Anatomique et Physiologique," par MM. Robin and Verdeil, as well as the Atlas of the work.

The crystals of urea and of its nitrate and oxalate, all colour polarized light, often very remarkably, according to the manner in which they are grouped.

The nature of many crystals may frequently be determined by the measurement of their angles in cases of doubt.

Pathology of Urea.

It has already been stated, that there are two principal sources of urea, one being from the nitrogenized elements of the food consumed, and the other from the disintegration of the tissues. The advocates of the distinctness of the source first named are Lehmann, Frerichs, Bidder, and Schmidt; but Liebig, Bischoff, and some others, hold that the urea is always produced from the metamorphosis of the nitrogenous tissues. The extremely great and rapid augmentation of the urea in the urine after animal food, is the chief fact upon which the views of Lehmann and his supporters rest, the formation being too considerable and too rapid according to them to be due to the disintegration of tissue.

In most diseases and disorders of an acute character, the diet is greatly reduced, and independent of this source of urea we should expect to meet with an excess of that excrementitious constituent of the urine wherever the waste of tissue was great; and that, on the other hand, it would be deficient whenever there was but little destruction of tissue. It will be found that this view is, for the most part, consistent with the observations hitherto made respecting the amount of urea in the urine in different diseases.

Urea is in great excess in *meningitis*, in which the whole urine usually, according to Heller, becomes solidified on the addition of nitric acid; it is also in excess in *pneumonia*, *pleurisy*, *acute tuberculosis*, and in *rheumatism*, especially when accompanied with *endocarditis*, and during the stage of exudation, it diminishing during absorption.

In the beginning of *typhus* there is also an augmentation of urea, but not to the same extent as in the maladies abovenamed.

Messrs. Fourcroy and Vauquelin have proved that there is much urea in the urine in *jaundice*, and John found it in excess in *gout*. Prout, as also Bastick, found it in excess in *diabetes insipidus*. Golding Bird has shown that urine depositing *oxalate of lime* contains much urea. He states that in 30 per cent. of the cases so much urea was present that the fluid crystallized into a solid on the addition of nitric acid. Prout often found much urea in the urine of children depositing *phosphates*.

Now, in the majority of the disorders referred to, the increase is doubtless to a great extent independent of the food consumed, because the amount of this taken would be greatly reduced.

It is diminished in *chronic nervous affections*, *neuralgia*, *hysteria*, and most other *convulsive diseases*; in *paraplegia* and *hemiplegia*, *anæmia*, *chlorosis*, and, according to M. Sigmund, in *chronic maladies of the liver*; it is diminished in *organic lesions of the heart*, and in some maladies of the *skin*. MM. Provost and Dumas, and Berzelius, as well as Sigmund, have found the urea diminished in *chronic hepatitis*. Sume doubt has been thrown upon this statement by M. Rayer, and Prout has even indicated the contrary.

The urea is of course deficient *in structural diseases of the kidneys*, which impede mechanically the escape of urea. In such cases it accumulating in the blood, finds its way into every part of the body, and has been detected in nearly every fluid, normal and pathological. This accumulation of urea in the blood gives rise to certain well-known symptoms, to express which the term *uræmia* has been employed.

It was formerly supposed that urea was deficient in *diabetes mellitus*, but this has been shown not to be the case; and the important fact has likewise been established, by the researches of Reich and Fonberg, that as the sugar is diminished, the urea is increased.

On the Treatment of Excess and Deficiency of Urea in the Urine.

We have to consider, first, whether the urea is in excess or is deficient in the urine; and here we would notice a great defect in all works on Urinary Pathology published to this time, namely, that the deficiency of any constituent of the urine is rarely treated of at all, but only its excess.

Second, we have to consider whether the excess is due to the quantity and quality of the food consumed, or whether it is independent of that cause, and arises from disorder or disease attended with undue waste of tissue.

In some cases, both causes of increase in the amount of urea may be in operation; but this is rarely the case; since in active diseases, in which the urea is in excess, such as meningitis, pneumonia, &c., the amount of food, especially of nitrogenous food, is greatly reduced.

It has been stated that a difference of opinion exists amongst chemists and physiologists, as to whether the urea formed shortly after partaking of nitrogenized food is produced from the superfluous elements of that food, as Lehmann supposes, or whether, as Liebig believes, it even in this case is derived from the disintegration of the tissues. Should the latter view be correct, then in the augmentation of the urea after food, we are furnished with a striking proof of the influence of over-feeding upon the nutrition of the body, and also with an argument against such a practice, because it can scarcely be conceived that this extremely rapid destruction and renewal of the tissues of the body can be conducive to its vigour and longevity.

Supposing, in the absence of any special disease, the augmentation of the urea to be due to the food consumed, we have in that case simply to regulate its quality and quantity, and the excess of urea will disappear.

Supposing the excess to be independent of either diet or disease, but to be due to excessive or violent bodily exercise, this must be lessened and moderated, when also the excess, denoting the extent of the waste of tissue, will in like manner disappear.

Lastly, should the excess be due to disease, we must determine the nature of the disorder or disease, and treat it in accordance with those general and established principles by which its treatment is regulated, having regard also to this further element in the case to guide us—namely, the knowledge of the presence in the urine of an excess of urea derived from an abnormal destruction of tissue.

It is obvious from the disorders and diseases in which *urea is deficient*, that one condition common to most of them is defective nutrition; that there is imperfect or defective appropriation by the tissues of new material, and as the necessary consequences, diminished waste of tissue, and consequent formation of urea.

The deficiency of urea in these cases supplies us with a knowledge of one element of their treatment, and shows us it is necessary that attention should be directed to the restoration of the nutritive powers.

The deficiency of the urea in the urine, arising from structural diseases of the kidneys requires a totally different treatment. In these cases, although there is great deficiency of urea in the urine, there is excess of it in the blood, its accumulation there giving rise to certain constitutional symptoms. Here while the treatment adopted must have reference, in the first place, to the disease of the kidney, in the second, it must have regard to the effects produced by the urea accumulated in the blood. Every means must be adopted by which the amount of urea in the blood may be lessened. One obvious means of lessening the quantity would be by cutting off part of the supply of nitrogen in the food. This means, in the case of certain active or acute structural diseases of the kidneys, it would be proper to adopt; while in those having a constitutional origin, it would, for the most part, be a highly improper method of treatment to pursue, as tending still further to reduce the already impaired constitutional powers. In these last cases the excess of urea must be got rid of, first by endeavoring to increase the eliminative powers of the kidneys; and second by promoting the escape of urea through other emunctory channels, as the skin and bowels. The first indication is fulfilled by improving the constitutional powers, by relieving congestion of the kidneys, and by mild and appropriate diuretics. The second indication requires the employment of diaphoretics, gentle aperients, the warm bath, friction, and moderate exercise.

Urea is sometimes found in the urine in excess, independent of any known disease, but often connected with dyspepsia and deranged nutrition. In these cases, the quantity of urine voided is usually much increased, its specific gravity varying greatly, being often above and sometimes below the usual standard, but the absolute amount of urea passed in the twenty-four hours is in excess. In such cases, there being abnormal waste of tissue, combined frequently with defective assimilation, the objects of our treatment should be, to improve the digestion and to lessen the quantity of water passed and the waste of tissue. For the latter purposes opium has been found very serviceable, combined, when the skin acts imperfectly, with diaphoretics, Dover's powder being a particularly useful preparation.

On the contrary, cases are met with in which the urea passed in twenty-four hours is absolutely very deficient, yet the quantity of urine voided is considerable, varying from six to ten and even twenty pints in the twenty-four hours, its specific gravity being of course very low, usually ranging from 100·2 to 100·8. These cases are often associated with severe dyspeptic symptoms; thirst is always present, the skin is dry, and bowels constipated; there is great mental depression and sense of fatigue. Here our treatment must be to lessen the excretion of urine, relieve thirst, &c., but above all the state of the digestive organs must be improved by alteratives and tonics. Dr. Rees has found *hippuric acid* in the urine in a case of this description, and suspects that it will often be found in such cases.

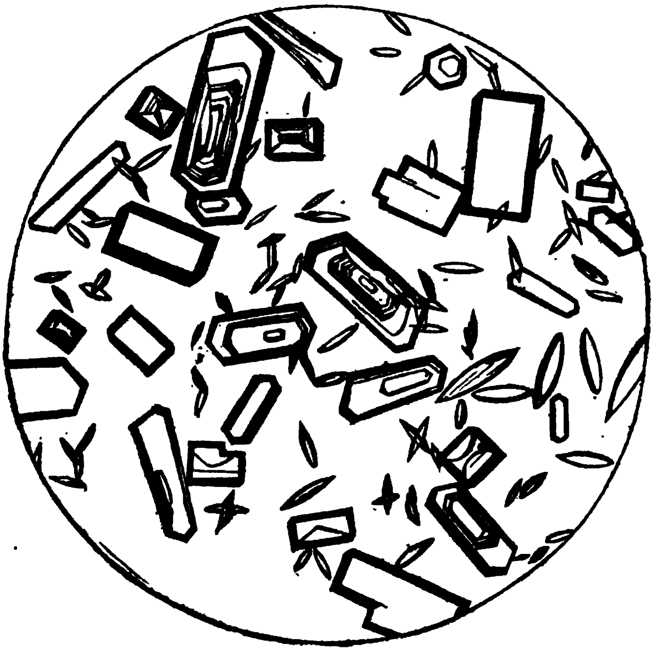
CREATINE.

This principle was first discovered by M. Chevreul in 1835, in the broth of meat. In 1844, Heintz detected it combined with creatinine in the urine, and in 1847 Liebig made known the results of his elaborate researches on this substance. He traced it through all the invertebrata, demonstrated the constancy of its occurrence in the juice of muscles, and he also found it in the urine. Indeed, creatine is a *normal* constituent of the urine.

Not only has creatine been found in the juice of muscles and in the urine, but it has also been discovered in the fluid of the amnion.

In the muscular tissue, not only is its presence constant, but the quantity found there is considerable: the heart, the most active muscle in the body, in particular, contains much creatine, but the largest amount which has yet been met with is in the muscles of the marten and of fowls.

FIG. 28.



Crystals of CREATINE (Magnified 100 diameters). April, 1849.

A tolerably large proportion of creatine also exists in the urine; so much, indeed, that Liebig considers it best to obtain it from that liquid.

In the blood only a very small quantity has been found.

The following are the relative proportions which have hitherto been indicated in different kinds of muscular tissue.*

Heart of the ox ..	1·37 per 100.
Ditto	1·41 „
Flesh of the horse ..	0·72 per 100.
Flesh of the ox ..	0·69 „
Muscles of man ..	0·67 „

The first two quantities are given by Gregory, the second two by Liebig, and the fifth by Schlossenberger.

Creatine is no doubt to be regarded as a strictly excrementitious substance. This view is opposed to that first enunciated by Liebig, who regarded it as a nutritious principle, but the circumstance of its constant presence in the urine, as well as its relations to creatinine and urea, are conclusive as to its being an excrementitious substance. This opinion was first advocated by Heintz, and it has been subsequently adopted by Lehmann.

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* Robin and Verdeil, loc. cit., p. 461.

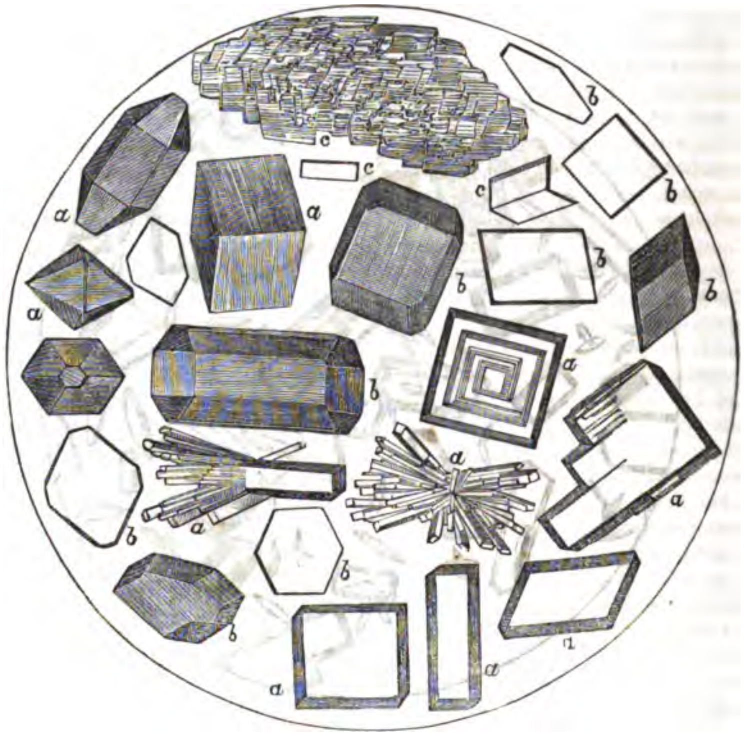
The circumstance of its constant occurrence in connexion with the muscular tissue, and its excrementitious character, leave little doubt but that it is formed during the disintegration of that tissue.

Chemical Characters of Creatine.

Creatine is a nitrogenous crystallizable substance, neutral to test paper, and not forming combinations with any of the other constituents of the urine, being, in fact, a chemically indifferent substance, not playing the part of either an acid or a base; it has the following atomic composition $C_8\ H9\ N_3\ O_4$.

It has a rough, bitter, pungent taste, and irritates the fauces, is inodorous, and unalterable in the air: it is soluble in 74·4 parts of cold water; in boiling water it is very soluble; in alcohol, and also in ammonia, it dissolves, only with difficulty, in alcohol, it requiring 9410 parts for its solution, while in ether it is insoluble; at 110° Fahr. it loses its water of crystallization, and is decomposed at a higher temperature: boiled with baryta water it is transformed into *ammonia* and *carbonic acid*, or into *urea* and *sarcocine*, it is dissolved without alteration in the weak acids, but in the strong acids, aided by heat, it is changed by the loss of two atoms of water into creatinine, which, in the act of separating from its combination with chloride of zinc, takes up water, and is re-converted, according to Heintz, into creatine. Creatine contains the elements of glycocoll, sugar of gelatine, plus two atoms of ammonia.

FIG. 27.



Crystals of CREATINE. *a, a, a,* from the juice of *flesh*; *b, b, b,* from *human urine*; *c, c,* from the same hastily crystallized. (From Atlas of MM. Robin and Verdeil.)

Liebig has noticed, that in a solution of creatinine not quite pure, which stood for several months in a cupboard, the whole of the creatinine gradually changed into creatine, which was deposited in a single fine large crystal; a slight mouldiness also appeared.

"The readiness with which creatine becomes decomposed into creatinine, urea, and sarcocine, which is isomeric with lactimide, all of which are undoubtedly products of excretion, proves beyond a doubt, that creatine approximates more nearly to these substances than to albumen and fibrin, and indicates the great probablity of creatine being decomposed, even in the living body, into these and other similar substances."*

Physical and Microscopical Characters.

A knowledge of the forms and characters of the crystals of creatine, as they occur in the urine, is very necessary. With this knowledge, and with the aid of the microscope, this substance may frequently be recognised in single drops of the urine, evaporated on a slip of glass, and always, if it be present in the urine, in the evaporated syrupy extract.

The crystals of creatine are transparent, brilliant, and nacreous, and they contain two atoms of water of crystallization; they belong to the clinorhombic system, and crystallize in the form of the right rectangular prism or right rhomboidal; the right rectangular prism is the most frequent form.

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* Lehmann, Phys. Chem., p. 181.

The prisms may be either long or short, narrow or broad, thick or thin; when both broad and thin, they constitute plates or lamellæ; the extremities of the crystals are usually square, but sometimes oblique, the angles being either entire or cut off in various degrees.

When the crystals are very thick and short, the angles being at the same time entire, they form cubes; but the angles of these may also be removed. Again, when the crystals are thick and long, the angles may be cut off lengthways, prisms with eight sides resulting.

When very thin and broad, the lamellæ may be either square, or oblique and rhomboidal, and the angles either entire or removed.

Illustrations of these several modifications of the right rectangular and right rhomboidal crystals of creatine, are given in Fig. 27.

Not unfrequently the crystals, in place of being single, occur united together more or less, the thick long rectangular crystals are sometimes thus united; but it is the thin lamellæ which most frequently occur in this compound form.

Lastly, single crystals occasionally split up into several other crystals, and so present a compound character. (Fig. 27.)

Some other curious modifications of the crystals of creatine obtained from the juice of muscles, will be found delineated in the Atlas of MM. Robin and Verdeil, and the chief of which are shown in Fig. 27.

I have myself met with crystals of creatine in the urine in several forms.

First, they have occurred to me in long, thick, rectangular or rhomboidal prisms, intermixed with shorter, broader, and thinner plates or lamellæ. These sometimes exhibit a curious tendency to unite at acute angles in twos and threes, when they frequently resemble open books and boxes. (Fig. 27.) This form I first met with in the urine some years since, and described it in the *British and Foreign Medico-Chirurgical Review* for 1853.

Another form in which they have occurred to me is that of short rectangular prisms or cubes. (Fig. 26.)

The third form in which I have met with them is that of thin cohering crystals, forming confused crystalline masses. This form is apt to occur in urine which has been hastily crystallized. (Fig. 27, *c*.)

Crystals of creatine are remarkable for their brilliant and micacious aspect, which causes them, when viewed under the microscope, to stand out conspicuously amongst the other crystals with which, in the evaporated and coloured extract of the urine, they are surrounded. This micacious aspect is alone sufficient to enable the observer to distinguish crystals of creatine from those of chloride of sodium and phosphate of lime.

It may here be remarked that all crystals of organic origin are distinguished from those of mineral composition by the manner in which they reflect the light, always appearing brilliant and micacious. By this single difference nearly all crystals of organic origin may be discriminated as a class from those of mineral formation, and when we add to this general difference, variations in the type and form of the crystals, the discrimination, by means of the microscope, of the crystals of various salts and substances becomes a matter of absolute certainty.

The chief salt present in the urine with which creatine is apt to be confounded is chloride of sodium, for this, like creatine, sometimes crystalizes in the extract of the urine in quadrangular prisms and cubes. The two substances may, however, be readily distinguished, for independently of the differences already referred to in their general aspect, the crystals exhibit very different appearances under the polariscope; while crystals of creatine, viewed by polarized light, appear vividly coloured, those of the marine salt are uncoloured. The discrimination of the crystals of chloride of sodium, as well as of the phosphates from those of creatine, may, however, always be effected in a very ready and satisfactory manner by means of a solution of nitrate of silver.

For the detection of the crystals of creatine in the evaporated extract of the urine, it is requisite that this should be examined within a short time of its evaporation, for the extract attracts water from the atmosphere, which acts upon and dissolves the crystals to a greater or less extent.

By the aid of solution of ammonia the creatine may be dissolved out of the concentrated extract, and afterwards procured in a crystalline state by the evaporation of the ammoniacal solution.

It appears, therefore, that creatine is distinguished by well-marked chemical, but especially microscopical, peculiarities; so distinct are the appearances presented by its crystals as they occur in the urine, that no difficulty need be experienced in identifying this substance when present in that liquid; indeed, no examination of urine instituted for pathological purposes should be deemed complete that does not embrace a notice of this normal constituent. From the meagre and indistinct descriptions given of this substance in most English works, I was led to infer, until I had directed attention to it myself, that its identification was attended with great difficulties.

On the Pathology of Creatine.

Sound pathology must always rest upon, and be consistent with, physiology. Two important facts have been determined in respect to creatine, —first, that it is formed primarily in connexion with the muscular tissue; and second, that it is an excrementitious substance. These facts taken together, go far to prove that it is derived from the disintegration of the muscles.

If this view is correct, and there is but little room for doubt, then we should expect to meet with the largest proportion of creatine primarily in the muscular tissue, and secondarily in the urine, in all cases in which the muscles are exercised greatly, or where, from disease of various kinds, they undergo marked wasting.

The direct observations which have hitherto been made support this view; thus much creatine has been found in the muscles of the more active birds, amongst mammalia in the heart, a never resting muscle, and in wild and hunted animals.

But few observations have as yet been made as to the quantity of creatine in the muscles and in the urine in cases of wasting of the muscular tissue from disease, as in marasmus or active inflammatory or hectic fevers, but as far as these have been extended, they fully support the opinions here expressed. Now that it has been shown that the detection of creatine in the urine is so easy, we may fully expect that observations regarding its occurrence in human urine will speedily be multiplied.

Treatment of Excess of Creatine.

Acting on the views thus set forth, the line of treatment becomes obvious. Over-action of the muscular tissue must be moderated, and when there is marked wasting, this should, as far as possible, be restrained. The exact character of the treatment to be adopted must, of course, depend upon the cause of the wasting.

Lectures
ON
INFANTILE SYPHILIS.

Delivered at Queen's College, Birmingham, during the Session 1857–58.

By LANGSTON PARKER, Esq., F.R.C.S.,

SURGEON TO THE QUEEN'S HOSPITAL, ETC.

The subject of infantile syphilis is one of grave interest and importance, bearing, as it naturally does, not only on the health and life of the individual concerned, but involving many delicate and serious questions which relate to the mode in which, or from whom, the disease has originated or has been produced. An infant who exhibits symptoms of a syphilitic taint sooner or later after birth derives this from one parent or from both; and hence it becomes a matter of the first importance to determine whence this has proceeded, as it is evident that unless the latent taint be eradicated from the diseased parent, diseased offspring, or the premature birth of a dead child, will, in the event of succeeding pregnancies, probably take place. In examining this most important question, I shall confine myself chiefly to the consideration of facts which I have myself observed, corroborating my opinions by references to well-authenticated cases, selected from authors who have themselves carefully observed, and whose opportunities and talents for observation are well known.

Influence of the Father.—I shall first consider the influence of a diseased father in the production of a diseased infant, the mother never having been diseased. I will suppose that the father, at some indefinite period before his marriage, has suffered from well-marked constitutional syphilis, but that for some time previous to that event he has exhibited no signs of disease. He marries a healthy woman, and she gives birth to an infant, which sooner or later after birth—i. e., in the course of the first month or so, shows symptoms of a syphilitic taint. Let me illustrate this by the detail of a few cases.

Case 1.—In August, 1852, I treated a patient for a well-marked attack of syphilitic lepra. The symptoms disappeared under the treatment, which was not very protracted, nor was it very regularly followed. In 1854 this patient married a healthy-looking young woman, who in 1855 was prematurely delivered of a dead child. In 1856 she was delivered, at her full time, of an infant, which appeared well and hearty for three weeks. It then began to *snuffle*, then had puckering of, and a dry eruption about, the mouth, and two large vesicles, resembling pemphigus, on the thigh and on the side. The child was treated by mercurial innunction on flannel bandages round the knees, and cured. In this case the father remains without syphilis for more than three years, yet the disease breaks out in his offspring. Mark what takes place on the part of the mother *in the* meantime: a premature birth of a *dead infant*, and a diseased living child cured by mercurial innunction. The father during this interval has had no symptom of syphilis; the mother never had any in her life; the ova suffer, and doubtless by impregnation with diseased semen.

In this instance, it must be observed, the mother escapes contamination; she contracts no disease, either from a diseased husband or a diseased fœtus. This is, however, not always the case. I adduce this case, of common occurrence, as the type of a class which is frequently met with in practice. There are others, which I shall presently mention, where, during pregnancy, or immediately after delivery, syphilis appears in the mother, without any primary disease ever having existed.

Case 2.—A. B—— was treated by me in the Queen's Hospital for a pustular syphilitic disease of the skin, of a very formidable character. The symptoms disappeared under the treatment employed. Whilst he was in the hospital, his wife brought her infant to me, covered with scaly blotches. The child was plump and apparently healthy when born, but a few weeks afterwards the patches broke out and the health began to decline. The mother had no symptom of disease; her breasts, as well as the infant's mouth, were free from ulceration. She was extremely anxious to be examined, fearing she might be labouring under some disease of the parts themselves. I instituted the most careful examination with the speculum, not only once but four or five times, and could never discover the least local disease. The child in this instance was alone treated and cured. I purposely abstained from treating the mother, whom I watched for nearly two years. She has never suffered from syphilis in any form. Many cases have been selected by M. Diday[*] from different authors, which are very similar to those I have just related. They tend generally to show that a father having symptoms of constitutional syphilis at the time of marriage, or at periods more or less remote before it, may procreate a diseased infant, and that the mother may never exhibit any symptoms of disease "Les mères etaient saines, rien ne faisent presumer qu'elles eussent été infestées." P. 22.

The explanation of these cases appears to be, that the ovule is impregnated with diseased semen, and its product is consequently diseased. By referring to Dr. Tyler Smith's sixth lecture, in THE LANCET for February, 1856, it will be very readily understood how this takes place. It is very common to see symptoms of constitutional syphilis appear many years after the healing and supposed cure of the primary disease, and on the same principle must be explained the procreation of diseased offspring by men who have exhibited no outward mark of syphilis for long periods.

M. Diday puts the question : Will a man who has had syphilis, but exempt at the time of marriage from all symptoms of disease, procreate a syphilitic infant? No positive answer can be given to this; neither can any answer that will apply to all cases. He may do so, but not necessarily. In some cases where the outbreak has been very violent not long before marriage, a healthy child is sometimes born; but this is not always so, as the details of Case 2 sufficiently show.[†]

CASE 3.—A. B——, the father of four healthy children, unfortunately contracted chancre, which was followed by a most formidable attack of syphilitic lepra, and a sore-throat. I saw this case soon after the constitutional symptoms manifested themselves, and attended to it throughout. The patient was treated by mercurial vapour for three months. After a lapse of two months, he was treated again by the same remedy for two months more. I then believed him well, and consented that he should resume intercourse with his wife. He did so. Since that period three healthy children have been born at their full time. Neither wife nor children have ever had symptoms of disease.

If we compare Cases 2 and 3, it will be observed that they are very similar in their history. Both had formidable attacks of constitutional syphilis; yet one begets a diseased child, and the other a healthy one. This is to be explained, doubtless, by the fact that one patient was submitted to a prolonged and energetic treatment; whilst the other had been submitted to no treatment before his wife conceived, or to one badly framed and irregularly carried out.

The history of Case 3 shows that constitutional syphilis may, by proper treatment, be perfectly and really cured—a fact doubted by many authors of established reputation.

M. Ricord has been made to say, that when one parent only has been diseased, the other transmits to the infant the immunity which such parent enjoys.[*] M. Diday also states, that the cases which he has detailed in reference to the point in question establish, without contradiction, the law, that an individual who has suffered from constitutional syphilis may procreate a healthy child, if such influence (i. e., the morbid tendency or syphilitic taint) is corrected during the act of impregnation by that of a healthy individual—i. e., of one exempt from any syphilitic diathesis.[†]

Both these theories, for as such they must be looked upon, are most unsatisfactory, and explain nothing; they are of no service in practice, and cannot be referred to in any way as a basis or guide upon which to form an opinion. The facts which clinical experience teaches are these: that any father who has been once affected with constitutional syphilis, although he may have been for some time free from any outward marks of the disease, may in cohabiting with a healthy female, procreate or beget a diseased child; but the chances are in favour of the infant escaping if the outbreak of disease have been very violent —i. e., if the skin have been loaded with eruption, or again if the patient have been submitted to a prolonged and energetic treatment, one ingredient of which consists in profuse and periodical sweating.

In all the cases which I have detailed, it will be noticed that the mother has escaped; there has been no syphilis communicated to her; but there is another class of cases in which the mother does not retain this immunity. At a variable period after conception she exhibits well-marked symptoms of syphilis, both in the genitals and in other parts of the body. I will mention a case which I observed and treated that puts this beyond a doubt, where no primary disease existed in the husband at the period of marriage, but where the symptoms of constitutional syphilis were manifest in the wife soon after the commencement of pregnancy.

CASE 4.—C. K—— married a healthy lady, having had no symptom of syphilis of any kind for a year previous to his marriage. Shortly after marriage his wife became pregnant, and the husband again suffered from copper-coloured blotches on the skin; he had ulcers in the throat, and lost his hair and eyebrows. The wife was prematurely delivered in the fifth month of her pregnancy of a dead child. She had about this time copper-coloured blotches like her husband, a sore-throat, and lost her hair and eyebrows. In this case, and I dwell especially on the fact, no sexual mischief existed. The wife was carefully examined; she had never any vaginal discharge of any kind; the vagina and mouth and neck of the uterus appeared totally free from disease.

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[*] Traité de la Syphilis des Nouveaux-nés, &c. Par P. Diday. Paris, 1854.

[†] In reference to this point, I know the case of a gentleman, who has exhibited unequivocal symptoms of constitutional syphilis for nine years; he has been married five years, and his wife has given birth to three healthy children, which, as yet, continue in perfect health. They have never shown the least symptom of syphilis.

[*] M. Prieur, Thèse, 1851, p. 28, quoted from Diday,

[†] Diday, op. cit., p. 55.

The organs of generation do not always escape; they are, indeed, very commonly affected, but with symptoms very different from those of a primary disease. Again, a proof that the mother derives the disease in such cases from her fœtus is to be found in the fact that the symptoms of syphilis, as far as the mother is concerned, very frequently disappear after abortion or delivery, even without treatment; and should she become pregnant again by a man who has never been diseased, she brings forth healthy children. A very remarkable case in support of this view, of the contamination of the mother by means of the fœtus in utero, is given by Dr. Balfour.*

Case 5.—"A respectable young woman, from the north, was married to a tradesman, who had no trace of syphilitic disease at the time of marriage, but he afterwards acknowledged that, two years before, he had disease, followed by slight secondary symptoms, which had entirely disappeared under medical treatment, and he had seen or felt nothing since. This woman complained of nothing until about three months after she became pregnant; then, however, symptoms of secondary syphilis became apparent; spots of psoriasis appeared on various parts of the body; hard knots were felt in the perinæum and on the external labia, and within the vagina was a hard, knotty feeling all over the mucous surface. Her child exhibited a distinctly syphilitic appearance, which was removed by treatment. Shortly after delivery, all symptoms of syphilis entirely disappeared, and she shortly afterwards went into the country; she was subjected to no medical treatment. A few months afterwards her husband died. She subsequently married a farmer. About six or eight months since I saw her, and she has borne three children to her second husband, and certainly more healthy children could not be seen. She informed Dr. Balfour she had never been under medical treatment since he attended her, and had had no medical man near her, except at the period of her confinements; she at the same time stated that she had never suffered during any of her pregnancies, from anything like what she had done during the first one."

The two last-quoted cases prove very strongly the position, that a mother, healthy at the time of marriage, and becoming pregnant by a man with latent constitutional syphilis, becomes herself diseased through the medium of the fœtus. Hence, Dr. Montgomery has said, "A woman so married to a man who has latent constitutional syphilis, by which she is infected, will show no symptom of the contamination until she conceives or perhaps miscarries, and then the taint is manifested by the development of secondary symptoms in the course of a few weeks, as if the infection was at first communicated and confined to the product of the ovary, and the general system became thence contaminated."

This is, deubtless, the true explanation of the matter, and one which, I think, must be generally admitted. Mr. Jonathan Hutchinson laid before the Hunterian Society, in October, 1856, a table of fifty cases in which he believed the mother to have been contaminated. In a correspondence with me on the subject of this communication, Mr. Hutchinson says, "In the discussion yesterday evening, Drs. Oldham and Lever both expressed themselves as very positive as to the not infrequent occurrence of the transmission, by men at the time in apparently perfect health, of constitutional syphilis to their wives. They hold, in common with many others, that the contagion is effected by the seminal fluid, and not by the fœtus, and maintain that they have met with women who have so received the disease without ever having conceived. In an enquiry which has extended over many years, Mr. Hutchinson states that he has met with but one instance of this, and here believes that an abortion at an early period had been overlooked. Mr. Hutchinson also states that Mr. Paget had been equally unsnccessful in finding a case in which constitutional syphilis had been contracted by a woman without either primary syphilis or pregnancy having preceded it.

The opinions of the late Doctor Colles on this subject are well known,* and Professor Porter, of Dublin, has lately† detailed several cases which seem to prove that syphilis may be communicated by the husband, apparently free from the symptoms of syphilis, to the wife, without the intervention of pregnancy or primary disease; these opinions agree with those of Drs. Oldham, Lever, and others, just alluded to. I mention one case that I personally observed and treated, about which there can be little doubt.

Case 6.—In January, 1858, J. K—— consulted me for secondary syphilis, characterized by a scaly eruption, and sores; where the crusts and scales had fallen off, large, foul ulcers had succeeded; he had also a sore throat, and ulcers on the soft palate, and red, indurated spots on the centre of the tongue. Six months previous to the commencement of these symptoms the patient had suffered from primary sores.

In May, J. K—— married, no symptom of syphilis being then evident. In September his wife came to me; she had then hard, solid lumps on the labia, thickening of tha labia majora and minora, which wese red, and internally covered with a white adhesive mucus; the irritation was intense. On the skin of the thighs there were a number of circular, red spots, and copper-coloured, scaly blotches existed in various parts of the body. She had never been pregnant

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* Edinburgh Medical Journal, October, 1856, p. 816,

* On the Venerial Disease, chap. xiii.

† Dublin Quarterly Journal, May, 1857.

Influence of the Mother—In the case just recorded, I have endeavoured to illustrate the influence of a diseased father upon his offspring, the mother remaining healthy. In some instances I am about to bring forward, I shall show that there are certain circumstances under which the mother may be the source of the disease, the father remaining healthy, never having been diseased.

The mother may be the source of disease to her fœtus, or infant, in four ways:

1. She may be diseased before conception.
2. She may become diseased after she has conceived.
3. She may disease her infant in its passage through the vagina or external parts, a source of infection formerly supposed to be very common, but in reality very rare.
4. She may disease it after birth. The first mode of infection has been commonly called hereditary, the second congenital, and the two last acquired. It is not always easy, or even possible, to point out the separate or distinct influence of each parent in the production of a diseased child, but the cases I have adduced in reference to the father I think must be convincing, and I am about to detail two others, which, on the part of the mother, will in all probability be found equally so.

Case 7.—A. C——, a very healthy woman, married to a healthy man, a tradesman, gave birth to four healthy children, all now living, during the first seven years of her marriage. Whilst nursing her fifth child, she had occasion to send for a woman to draw her breasts. Soon after this, she perceived ulcers about the nipples, to these succeeded copper-coloured blotches, spread pretty extensively over the body, and a sore-throat; the child she was nursing dwindled away and died. The next three children were born dead; two others soon after birth had eruptions on the skin, and wasted away and died. The disease on the part of the mother was not suspected, nor was she, during the time I have mentioned, treated. Her husband during all this time remained in the best health. After the death of the fifth child, she consulted me about ulcers on the legs, which were due to the detachment of the crusts covering some of the blotches I have just mentioned. I examined her carefully. She was then suffering from a distinctly and well-marked syphilitic lepra, the symptoms of which disappeared under a treatment by mercurial vapour. In this case, the separate influence of the mother is well shown. We observe a healthy father, a healthy mother, four healthy children; then the breast diseased by a suck-pap, followed by an eruption of marked character, sore-throat, the child then sucking, wasting and dying, and subsequently three children born dead, and two dying of wasting of the body, preceded by eruptions on the skin; all this time the father having no symptom of disease. A similar series of phenomena might follow if a diseased child were placed with a healthy wet-nurse. If the nurse became again pregnant, she might probably give birth to a diseased child. I quote a case from M. Cazenave to illustrate this.

Case 8.—A wet nurse, previously healthy, received an infant to suckle, which, fifteen days after birth, had blotches on the vulva and ulcers on the mouth. It died at the age of three months. Soon after the death of this infant, the nurse perceived tubercles on the genitals. Six months after she was delivered of a daughter, which, at its birth, appeared healthy, but soon afterwards had condylomata of the vulva and perinæum, and an eruption on the thighs.*

The mode of infection, and the influence of the mother, is precisely the same in this case as in the last, although it is not so remarkable, neither is its history as defined and clear. I shall adduce one other instance before leaving this point of my subject.

Case 9.—A healthy man married a very healthy woman. I knew them both. At the usual period, and at her full time, she was delivered of a remarkably fine boy. All went on well for three weeks, when the breasts became troublesome, and a suck-pap of confessedly indifferent character was employed. Soon after this an ulcer formed near the nipple, which was difficult to heal, but at length got well under the use of black-wash. Soon after this the patient became covered with an eruption, which I saw; it was a well-marked syphilitic roseola. The infant had a similar eruption; and then a large sore near the anus. The mother also had a very sore mouth, and ulcers on the tongue. The symptoms disappeared under treatment. The patient became again pregnant. She aborted, or was rather prematurely delivered of a dead child, in the seventh month of pregnancy. She became pregnant a second time, and was again prematurely delivered in the seventh month of a dead infant. During the whole of this period the father remains perfectly healthy, and has never suffered from syphilis.

I could cite many more cases of a similar character from my own practice, and those of others; but those which have been already given are sufficient to show the occasional separate and single influence of the mother in the procreation of syphilitic offspring. What length of time the taint may remain in the mother, if not properly treated, it is difficult to say. I am of opinion for long periods, as Case 7 shows. I have very little faith in syphilis, in such instances, wearing itself out.

It will be observed that the influence of the mother in the production or communication of disease to her offspring is different in the cases I have just recorded. In the first instance, she is healthy, and gives birth to a healthy child; she then becomes diseased, and communicates such disease to the sucking infant. This is what I have described as acquired syphilis; and the prospect of cure by judicious treatment is much greater than in the second case, where the mother, remaining uncured, again conceives and gives birth to a diseased child. Here the disease becomes hereditary. The parent diseased before conception gives birth to a diseased child, which is then formed and developed in the womb of a tainted mother.

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* Cazenave. Revue Médicale de Paris, 1852, p. 160.

In the first case the infant may generally be cured; in the second, if the child is born alive, the prospect of cure is uncertain and improbable, hence M. Lagneau has said, "Infants conceived and developed in the womb of a female suffering from constitutional syphilis seldom live beyond the period of the first dentition; if they survive this period their health is generally delicate and precarious, in spite of the most rational treatment that can be adopted." ("Syphilis de la Femme Enciente," p. 283. Paris, 1817.)

It will be observed that, in the cases I have hitherto mentioned the infant is diseased in three different ways; and I think a different prognosis attaches to each mode of origin. In the first case, the father impregnates the ovule with diseased semen, constitutional syphilis in him being either latent or manifest; but the product of the ovule, the fœtus, is nourished and developed in the womb of a healthy female. In such case, if a diseased child be born, a reasonable hope of cure may be entertained, and such hope is commonly fulfilled.

In the second case, where the mother and father are both healthy, and the former becomes diseased after birth, and communicates such disease to her offspring in the way already described, the infant may generally be cured.

In the third case, where the infant is conceived and developed in the womb of a mother diseased before conception, the prognosis is, as I have already stated, most unfavourable.

Clinical Lecture

ON THE

AFFECTIONS OF THE BURSÆ.

Delivered at St. Mary's Hospital.

BY WILLIAM COULSON, ESQ.

SURGEON TO THE HOSPITAL.

GENTLEMEN,—On a former occasion* I described to you some affections of the superficial bursæ, but my remarks were principally confined to the bursa of the patella, inflammation of which so often arises from accident or injury.

Let us conclude the subject by a consideration of the deeply-seated bursæ. These structures differ from the superficial, not only in seat, but in form and arrangement. They are always connected with the tendons of muscles, for which they act as sheaths, and are sometimes called vaginal; they are more or less elongated in form, and serve to protect the tendons from the effects of friction against each other, or against bone or ligament. In structure these bursæ are more closely allied to that of the synovial membrane with which they are often continuous. They do not present the same filamentous structure as the more superficial bursæ, but are composed of a simple basement membrane covered with epithelium on the free surface, and itself covering a very curious arrangement of blood-vessels, forming a net-work several layers thick. The office of these vessels is, probably, to promote the rapid secretion and absorption of the oily fluid which lubricates the interior of the sheaths, and is necessary for the due performance of their functions.

From these observations you will naturally look for the bursæ in the forearm and hand, where the tendinous structures are so numerous, and complex motions constantly going on. There, accordingly, are the favourite seats of the deep bursæ. We find them, for example, on both aspects of the wrist. On the dorsal surface there are six distinct sheaths following and protecting the extensor tendons of the thumb, little finger, and other fingers, together with the ulnar and carpal extensors. Along the palmar surface of the wrist and forearm we find two sets of deep bursæ, some of which are small, while others are of considerable size. The palmaris longus and brevis are surrounded by loose areolar tissue, like rudimental sheaths, which secretes a thick serous fluid, and is liable to the same affections as the more perfect bursæ. There is well-marked bursa on the tendon of the flexor carpi ulnaris, especially near its point of insertion, while the anterior region of the wrist and the flexor muscles of the fingers are enveloped in such a multitude of sheaths that it is almost impossible to enumerate them. In the lower extremity likewise many of these bursæ are found, and particularly at those points where the tendons of large muscles pass over joints or bony prominences; in fact, where they are most required. For, example, we find a large bursa at the point where the glutæus maximus passes over the trochanter major. There is also another deep-seated bursa of some importance which lies behind the tendon of the pectineus muscle on the pubes and capsule of the hip-joint. In connexion with the knee-joint, there are several of these bursæ, the chief of which are those of the triceps in front, and the popliteus behind. Then the tendons of the muscles of the foot, like those of the hand, are for the most part furnished with vaginal bursæ.

It is worthy of remark, that the deep bursæ contiguous to the joints frequently communicate with the articular cavity. You will readily understand the practical bearing of this circumstance; at the shoulder-joint it is the normal state, as the long head of the biceps always enters the joint, and many other deep seated bursæ communicate either with the superficial bursæ or with the articular cavities. Thus the deep bursæ, both in front of and behind the knee-joint, are often lined with the same synovial membrane as the joint, and it has been occasionally found that the deep bursa communicates with the hip-joint.

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* THE LANCET, p. 14 of the present volume.

The fluid contained in these deep bursæ is more abundant than that secreted by the superficial; it is viscid, of a yellowish colour, and composed of albumen and mucus. Under the influence of inflammatory action, this fluid undergoes various modifications. During the early stage secretion is arrested, and the fluid becomes thinner; hence the crackling sensation from which the French surgeons have adopted the term painful crepitation of the tendons. At a later stage, the fluid is increased in quantity, and may become quite serous, though it is often of a reddish-brown colour from admixture of blood. The interior of the sheaths exhibits the ordinary signs of chronic inflammation in such structures; it is thickened, and the smooth surface is converted into a dull-looking, uneven tissue, from which shreds or vascular fringes, in various stages of development, project. The diseased bursæ, especially those of the wrist, sometimes contain numerous small fibro-cartilaginous bodies, similar to those found in certain rheumatic affections of the joints.

The symptoms of disease of the deep-seated bursæ are often obscure. Beyond pain in the situation of the bursæ and some impediment to motion, the earlier symptoms are not well marked; the gradual development of the disease, and the absence of other signs of articular malady in the progress of the complaint, are the main points to guide you. But I have seen cases, especially in connexion with the hip-joint, where the diagnosis remained uncertain for a considerable time. On the other hand, when the disease progresses more rapidly, when the deep bursa is distended with fluid, it may form a tumour in the groin, to a certain extent enveloping the artery. The tumour, in such case, may resemble aneurism, from which a careful examination will be required to distinguish it. Inflammatory development of a deep bursa, again, may be mistaken either for acute or chronic abscess, for encysted tumour, and sometimes for malignant growths. Amputation of the foot has been rendered necessary by the development of soft accidental tissue from the diseased bursæ of the ankle; and so far as the local signs went, it was impossible to determine the nature of the disease before the operation.

But the usual seat, gentlemen, of enlargement of the deep bursæ is the synovial sheath which invests the flexor muscles of the fingers, and extends from the forearm under the annular ligament to the palm of the hand. From its comparative frequency, this complaint merits particular attention. The most common cause is long-continued irritation of the parts, such as we might suppose to arise from the pressure of tools, &c.; but it frequently happens that no satisfactory cause can be discovered. The disease usually commences with some uneasiness in the part; after a time this may amount to pain, at first slight, and not noticed unless some greater effort than usual is made. The hand and wrist feel stiff in the morning, but this soon goes off. The patient then begins to experience some pain, and to perceive that a tumour is gradually forming. There is much variety in these respects. Sometimes, instead of pain, there is only experienced an uneasy sensation up the fingers, wrist, and forearm; sometimes nothing more than weakness and difficulty of motion. In other cases it is a tumour which first attracts attention, while the other symptoms are only felt at intervals, or after some greater exertion than usual.

The shape and extent of the tumour will, of course, depend on the bursæ with which it may be connected. Thus it may begin in the palm of the hand or in the lower part of the forearm; but after a certain time it forms a considerable swelling, which is common to both these parts, but is constricted in the middle by the annular ligament of the wrist-joint. The tumour now forms a bilobed mass, on which the fingers have an involuntary tendency to close; it is indolent and painless on pressure, fluctuating to the feel, and presenting singular projections according as the tendons are more or less bound down. On steadily pressing down the contents of the tumour towards the hand, the movement of the fluid may sometimes be perceived, or a kind of rubbing with "crackling" sensation, on which Dupuytren used to lay great stress as a diagnostic symptom. The pain and feeling of weakness become so great that the limb is rendered useless, the fingers being permanently bent on the smooth compressible tumour formed in the palm of the hand by the enlarged bursa. This state of the fingers is not to be neglected; for if we allow them to remain in this flexed state for a considerable time, the ligaments and articular surfaces undergo permanent changes, which even the cure of the bursal enlargement fails to remove.

These bursal tumours are slow of growth, and often continue for years before they acquire a great size. Sometimes they become stationary, at other times they continue to increase, and give rise to much inconvenience, even entailing the loss of the motion of the hand.

When these cases come under our care, we must try to promote absorption of the fluid effused in the bursæ, and to get rid of the products of inflammation in the affected parts. Blisters and stimulating ointments are commonly had recourse to, and when the tumour or swelling has been reduced, friction and passive motion of the fingers should be employed. But these means often fail, and an operation becomes necessary for the cure of the case. Various plans are recommended, as laying open the tumour, the introduction of a seton, subcutaneous puncture, and treatment with iodine injections. I would advise you to try other plans before laying these bursæ open. The use of the knife is always attended with some risk; inflammation spreads rapidly through these diseased tissues, and when it has been subdued, the mobility of the fingers is often impaired to a considerable extent. The use of the seton I would condemn for the same reason. Subcutaneous incision of the tumour is a safer operation, and may afford good results when combined with pressure. I would recommend you to try it whenever it is practicable; should it fail, then have recourse to iodine injections, beginning with one part of the compound tincture of iodine to seven of water, and injecting the sac every day. Allow the injection to remain for a minute or two, then empty the cyst, and apply pressure to bring the walls of the sac together. When this is accomplished, direct your attention to the state of the fingers, and endeavour to restore their mobility by friction, passive motion, and mechanical means, should they be necessary. However, both the subcutaneous puncture and injections frequently fail in these cases. The sac often contains a large number of fibro-cartilaginous bodies, like millet-seeds in size and form, which cannot be evacuated by subcutaneous puncture; even when a larger opening has been made, through which these bodies have been brought away, and iodine injections have been tried, the cure has not been effected. Some of you will remember a case of this kind, which I had in Manvers ward, in which iodine injections were tried for some time without success, and ultimately the whole sac, except where it was bound down by the annular ligament, was laid open. Considerable constitutional irritation at first followed the operation, but the patient recovered, the power of moving the fingers being in no way interfered with. You will find a cast of the hand in our museum.

In the observations which I have made on the bursæ in this and my former lecture, I wish to impress on your attention, that in enlargement of the superficial bursæ—such as the housemaids' knee and miners' elbow, &c.—you will find simple puncture of the swelling and pressure, in the large majority of cases, an effectual mode of treatment. On the other hand, in enlargement of the deep-seated bursæ you will often find counter-irritation, simple incision with pressure, and injections fail, and ultimately be obliged to lay open the entire sac.

Original Papers.

NOTE ON CAMPAIGNING IN THE HOT SEASON IN INDIA.

By J. E. DEMPSTER, Esq.,

SUPERINTENDING SURGEON, BENGAL ARMY.

[Communicated by James Ranald Martin, Esq. F.R.S.]

At a time when the prospect of a hot weather campaign for the greater number of our European soldiers in India amounts almost to a certainty, the following account of the sanitary condition of the troops engaged in the siege of Mooltan during the hot season of the year 1849 may not be without interest either to the medical or military reader. Without losing sight of the fact that long-continued exposure to a high temperature is, as a general rule, destructive to the health and vigour of the European constitution, the subjoined narrative will, I think, show that a temporary exposure to great heat is not, *per se*, so dangerous as is generally supposed; and that if care is taken to exclude other and more baneful influences, the European soldier may take the field with comparative impunity even in the hottest months of the Indian year.

The force under Sir W. S. Whish took the field in July, 1849. The fort of Mooltan was notoriously the hottest spot in one of the hottest regions of the north-west provinces—according to native report, a very "jehannum;" and the district in which the fort is situated had the worst possible reputation for insalubrity during the latter months of the year. Much anxiety was everywhere expressed for the fate of troops sent to such a locality at such a season. The measure was loudly condemned by the local press, and not a few prognosticated that General Whish's force would be first prostrated by disease, and then fall an easy prey to an active enemy. Happily the result entirely falsified all these evil anticipations.

During the first few marches a number of men fell victims to that fearful disease, the *apoplexy* of the hot season; and it is here worthy of remark that the fatal seizures usually occurred about three o'clock in the morning, and long before the sun was above the horizon. But the European constitution, under the influence of excitement, soon accommodated itself to the circumstances in which it was placed, and two full European regiments, with a large proportion of European artillery, continued under canvas *during* the hottest and most unhealthy months of the Indian year, and not only escaped all unusual sickness, but were literally as healthy in all respects as they could have been in the best cantonment of the Bengal presidency.

If I can satisfactorily show how it happened that the European soldier suffered so much on first exposure to a very high temperature, and how he afterwards obtained such immunity from disease, some valuable practical deductions will probably result.

When the force left cantonments, the hot wind was blowing like a blast from a fiery furnace. Up to the hour when the European soldier was thus suddenly called upon to perform fatiguing marches in such a temperature, he had been leading a life of comparative sloth and inactivity, and it cannot be doubted that in too many instances he had been in the habit of consuming large quantities of ardent spirits. It is further probable that a few days' supply of the accustomed indulgence was carried into the field either by the men themselves or by their camp followers. Is it surprising, then, that frames stimulated with ardent spirits, unaccustomed to exercise, and suddenly subjected to bodily fatigue in such a burning atmosphere, should in some instances have sustained a fatal injury? But once fairly on the march, and in a foreign territory, all would be restricted to the ration allowance of spirits, and all would be daily becoming broken into regular bodily exercise. These considerations will, I think, account for the first fatal effects of exposure to a temperature which was afterwards borne with comparative impunity.

I shall now attempt to account for the unusual healthy condition of the troops during the remainder of the hot season.

1st. In the provinces under consideration the periodical rains are always late, and often scanty and precarious. In 1849 no rain fell at Mooltan until near the end of October, when we had one smart refreshing shower, the precursor of the cold weather. Up to this period the sky had been cloudless, the air intensely hot and arid, and not a tree to shelter the tents of the men from the fierce rays of the sun. Tables, chairs—nay, the very bedclothes in the tents, felt literally hot to the touch! When General Whish approached the Mooltan territory, he fortunately took and held possession of the head of the main canal by which the surrounding country is irrigated on the periodical rise of the great rivers of the Punjab. His object was to cut off the means of filling the ditch of the fort, but in doing this he unconsciously brought about other and perhaps more important ends. In such a season as the one just described, without a drop of rain, and deprived of the usual means of irrigation, all the ground in the neighbourhood of the camp remained parched and absolutely sterile. The air also continued, from the same causes, hot and dry in the highest degree. To these conditions, both of the soil and atmosphere, I believe we mainly owe our singular immunity from the usual diseases of the locality and season of the year. Without a certain degree of moisture there can be neither vegetable reproduction nor decomposition. If, then, the poison we call malaria be a product of the decomposition of vegetable matter (as I believe it really is), it cannot be evolved from a perfectly dry soil in a perfectly dry atmosphere. So antiseptic was the air of General Whish's camp, that the carcases of dead animals, instead of putrefying and giving out offensive effluvia, dried up into black, inodorous mummies. It thus appears that, although the troops were subjected to intense atmospheric heat, a combination of circumstances had happily secured to them that year a *non-malarious locality.*

2ndly. A complete and well-regulated conservancy system was organized by the medical staff, and rigidly enforced by the general in command, during the whole period of the siege. This specially included ventilation and care not to overcrowd the tents of the men.

3rdly. I may safely assert that the commissariat and medical arrangements were complete in all respects, and that the soldier, whether in health, or sick or wounded in hospital, wanted for nothing that he had a right to look for in the best cantonment.

4thly. Situated as the force then was, it was impossible for the men to obtain a drop of liquor beyond the moderate allowance regularly served out from the Government stores.

Whatever were the real causes, the fact is undoubted, that the troops engaged in the siege of Mooltan that year formed one of the most healthy portions of the Bengal army. Another example of nearly the same kind may further serve to allay public anxiety at the present moment.

On the annexation of the province of Oude by Lord Dalhousie, a single European regiment (H.M. 52nd) was left to garrison Lucknow, and it became necessary to find shelter for the men in the native city before the setting in of the ensuing hot weather. A large and lofty range of buildings, known as the "King's Mews," was made over for this purpose, and the barrack department was directed to clean and otherwise put it in a fit condition for the reception of European troops. The barrack accommodation thus hastily provided was much more spacious and convenient than could have been looked for in a native town; but in carrying out the necessary alterations a most grievous mistake was committed. When first made over to the military authorities, the floors of the buildings, and especially the floors of the "verandahs" were much broken and full of deep excavations, and outside there was an enormous dung heap, the accumulation of years, of stable litter of all kinds. In executing the order to repair the floors and remove the old litter, the native superintendent thought he could most speedily and easily effect both ends *by filling up the hollows in the floors with the old and now disturbed dung and litter*, and smoothing all over with a neat covering of clay and plaster. This was not discovered until afterwards. Not long after the regiment had, on the approach of the hot weather, taken possession of their temporary barracks, cholera, in a very virulent and fatal form, broke out amongst the men, although that disease was nowhere else known to exist in the crowded and dirty city of Lucknow. A special medical committee, of which I was president, was assembled to determine what was best to be done under such circumstances. The committee, considering the disease to have been of local origin, recommended that the regiment should be immediately moved out into camp to a well-drained and open plain some distance from the city; that an extra number of tents should be furnished for the accommodation of the men; and that, the sick being left behind in hospital, all communication should be strictly cut off betwixt the hospital and standing camp. If after the first move cholera still continued, it was further recommended that the regiment should again change ground in an opposite direction, and so to keep moving at short intervals until the disease entirely disappeared. The obvious objection to these measures was, that the hot weather was fairly set in; that such exposure would subject Europeans to the severest forms of tropical disease; and that the remedy might prove a worse evil than the one we desired to avoid. To this it was answered, that, proper precautions being taken, the risk of this exposure was not so great as it appeared to many, and that, even under the worst circumstances, it was better to encounter the contingent risk of ordinary tropical disease than to bear the brunt of virulent endemic cholera. The committee's recommendations were adopted. After going into camp a decided improvement took place both in the number and severity of the cases; but the disease was not extinct. A second move was then determined on; the regiment took up a fine, clear, elevated position not far from the Alumbaugh, and in doing so fairly left the cholera behind. Meanwhile energetic measures were taken to clear and purify the old temporary barracks, and to provide additional accommodation for the men if disease in any shape should force them to seek better shelter from the sun than that afforded by tents. But the cholera having disappeared, they happily remained in other respects unusually healthy. This being the case, it was determined "*to leave well alone*," and the regiment continued with perfect safety under canvas during the whole of the remainder of the hot season.

The following practical lessons may, I conceive, be drawn from the facts above,—viz: That if circumstances should urgently demand the presence of European troops in the field during the hot weather, it is essential, as far as possible, to take the following precautions:—

First and chiefly—To select a well-drained non-malarious locality. Without this, all other measures will prove ineffectual.

Secondly—To enforce a judicious system of sanitary conservancy regulations, especially including ventilation, and care not to overcrowd the tents of the men.

Thirdly—Strictly to prevent the men from procuring unwholesome country liquor, or a drop of ardent spirit beyond the regulation allowance served out from the commissariat stores.

Fourthly—If cholera in an epidemic form should break out in camp at once to change ground, avoiding the course of great rivers and main roads; and to continue so changing, at short intervals, until the disease disappears.

I need not here insist on good commissariat and medical arrangements, without which it is hoped no British force will ever again take the field.

If all these conditions can be secured, a hot-weather campaign, if unavoidable, may be contemplated with little comparative alarm.

ON A SUCCESSFUL CASE OF CÆSARIAN OPERATION: MOTHER AND CHILD SAVED.

By James Hawkins, Esq., M.R.C.S.E., Newport, Monmouthshire.

The patient, Matilda T——, was twenty years old, and four feet one inch high. Her mother states of her, that she had been "hurted in her birth;" she made no effort to talk before her fifth year, and could not speak distinctly until her twelfth; her deciduous teeth did not appear until she was eight years old; at this age, too, she made her first essay to walk with crutches, with which she could not dispense until she had attained the age of ten. She menstruated first in her eighteenth year, thence, to the period of her confinement, only four times, at irregular intervals, and in small quantities. From the age of twelve to twenty she enjoyed uninterrupted good health.

On the 17th of February last, labour pains commenced. I saw her next day; and, upon examination per vaginam, found that the dimensions of the pelvis were very irregular and small, the last lumbar vertebræ projecting so far over the brim that the antero-posterior diameter, or rather the distance between the symphisis pubis and last lumbar vertebra, did not exceed an inch and three quarters. Expulsive pains not having commenced, I left her till next day.

On the 19th, I again visited her, in company with Messrs. Brewer and Woollett, both of whom coincided in opinion with me that the Cæsarian section was the most feasible—the only means whereby the life of the fœtus could be preserved, and, under the circumstances, the most favourable to insure the life of the patient Accordingly in their presence, and with my assistant, Mr. Charles M'Ardle, having previously obtained the consent of the patient and her parents, I proceeded to operate. The bowels had been frequently moved during the day, the bladder was emptied, and about a quarter of an hour before the operation the membranes had ruptured without interference, the os being dilated about the size of half-a-crown.

Having been placed on a table, with her legs hanging over one end, and her head and shoulders slightly pillowed up, she was put under the influence of chloroform. I commenced an incision about half an inch to the left of, and the same distance below, the umbilicus, extending about eight inches towards the pubis, and parallel to the mesian line. Integuments and subcutaneous adipose tissue having been cut through, the subjacent tendinous structures and peritoneum were successively divided to the same extent as the first incision. The uterus being now exposed, was cut into to the extent of about six inches, bringing to view, the fœtus, presenting naturally with the funis coiled round it. The fœtus, placenta, and membranes having been carefully removed, the uterus contracted firmly almost immediately. A small portion of omentum that protruded having been returned, the parts were quickly brought together with sutures and long strips of adhesive plaster in their intervals; over this were placed a few rolls of lint; and a broad bandage being tightly applied over all, she was removed to bed. No vessel required ligature; and there was very little hæmorrhage during the operation.

The infant, being detached from the placenta, was consigned to the care of a female attendant, and, when seven days old, weighed eight pounds and a half. After being conveyed to bed the patient was ordered to have one of the following powders: powdered opium, two grains; chloride of mercury, three grains; make into three powders; one to be taken every three hours. At ten o'clock P.M., four hours after the operation, the pulse was 102; she had taken two of the powders, did not complain of pain, and had a slight discharge from the vagina.

February 20th, second day after the operation. —Passed a restless night, but without pain; pulse 96. Ordered, powdered opium, twelve grains; chloride of mercury, six grains; make into six pills, one to be taken every four hours.

21st (third day).—The patient slept five or six hours last night, and passed urine for the first time; she has occasional pain, like uterine pain, in the abdomen, which yields a tympanitic sound on percussion, pulse 94. In the evening of this day the uterine pain became more severe and frequent, and there was tenderness on pressure over the abdomen. She had pain in the head also and an anxious countenance. There had been a slight bloody discharge from the vagina, which was very fœtid; the pulse rose to 104. Ordered powdered opium and chloride of mercury, of each six grains, made into six pills, one to be taken every hour.

22nd, (fourth day.)—Slept a little occasionally last night. Tympanitis and abdominal tenderness rather increased; pulse 96, intermittent. In the evening the pulse was 130, small, and wiry; the uterine pains occurred more frequently, and were the more distressing owing to the tympanitis, which still continued, and the peritonitis, which had now supervened. An injection to be administered immediately, consisting of barley-water, a quart; and muriate of soda, half an ounce. This was retained entire for two hours, after which the bowels began to act freely. To have eight grains of Dover's powder at bedtime.

23rd.—Had no sleep last night; the gums were tender, and the pulse 134. The bowels moved frequently and involuntarily. Peritonitis and tympanitis still continue. Ordered, chloric ether and aromatic spirits of ammonia, of each two grains; compound tincture of cinchona, half an ounce; water three ounces: half an ounce to be taken every hour. The uterine pain recurred in the afternoon; at night the pulse was reduced to 120. Powdered opium, twelve grains; calomel, six grains; make into six pills, one to be taken every second hour.

24th.—Slept a little last night; bowels still acting very freely; has a slight discharge from the vagina; pulse 120; tympanitis much less; peritonitis easier. At eight o'clock, P.M. she was roused from her sleep by a sudden noise, after which she grew fretful, the uterine pain occurred more severely, and the pulse rose to 132. Ordered to continue the last pills, some of which remained, owing to her having slept a good deal this day, and of course was not awakened to take the pills.

25th (seventh day).—Had an easy night; tympanitis entirely gone; peritonitis almost gone; pulse 120. On this day the wound was opened, and sutures removed. The upper part looked very healthy, and inclined to adhere, and from the lower end there was a very offensive discharge. Having carefully sponged the wound, I placed a thin strip of lint, spread with spermaceti ointment, along its edges, and brought them closely together with long strips of adhesive plaster, placing a folded towel for a pad on each side; I bound a broad roller over all. After this the patient expressed herself much relieved, but fatigued. To have an ounce of brandy in arrowroot directly, and beef-tea frequently. In the evening, the pulse was 120, weak. She called for something to eat. The uterine pain had recurred, but not so severely. Ordered, powdered opium, six grains, in three powders, one to be taken on the occurrence of the pain.

26th.—Had a very good night; bowels quiet, and very little pain; pulse 108; feels comfortable and hopeful. In the evening, the pain recurred as usual. Repeat the last powders.

From this date she continued to progress steadily, with the exception of a troublesome attack of bronchitis, which yielded to appropriate treatment. The wound was dressed every other day with a strip of lint, adhesive plaster, compresses, and roller as before, saturating the lint with the compound tincture of Benzoin, instead of spreading the spermaceti ointment over it, as in the first dressing, and stimulating the edges occasionally with a strong solution of nitrate of silver. The uterine pain continued to occur in the afternoon, but becoming less, and coming on at a later period each day for a week after this date, when it disappeared entirely. It was always much assuaged by two-grain doses of powdered opium, of which she had one each afternoon.

On the 18th of March, she had a slight show of the menstrual discharge On the 25th, she began to apply the infant to the breast, and in a few days after had a fair supply of milk for it. The cicatrix of the wound measures at present only four inches.

For the first week, the patient was kept entirely on milk and farinaceous food, after which she had beef-tea, and in a few days was allowed a small quantity of mutton-chop. On the 4th of April, she got out of bed for the first time. Since then, she and the infant, a fine little girl, have frequently been in my surgery, and are at present in perfect health.

CONTRIBUTIONS TO THE PATHOLOGY OF THE RECTUM.

By T. B. Curling, Esq., F.R.S.,

SURGEON TO THE LONDON HOSPITAL.

No. IV.

Nervous Affections of the Rectum.

There are few surgeons much engaged in practice who have not been consulted occasionally for some nervous affection of the rectum. The symptoms as well as the causes of the complaint are obscure, and the diagnosis not unfrequently perplexing. On analyzing the symptoms, they will appear for the most part to consist, in some instances, in an irritability, or too frequent an inclination to relieve the bowels; in others, of a morbid sensibility or undue tenderness of the part; and more rarely of an exaltation of sensibility independent of contact, or of a neuralgia. The characters of these nervous affections will be shown in the following observations.

Irritable Rectum.

In the derangements of the alimentary canal, and of the organs connected with it, the fæces are often unhealthy and irritating to the mucous membrane, consequently, when passed into the rectum, they excite uneasiness, with an urgent desire to void them. Equally pressing and painful calls are experienced when the bowel is ulcerated and in other ways diseased. In "the irritable rectum" there is an inclination, more or less urgent, to empty the bowel, usually at inconvenient times, although the mucous membrane as well as the fæces are healthy, and often, when there is little or nothing to expel. Such was the nature of the following case.

Case 8.—*Irritable Rectum Relieved by Treatment.*—The Rev. ——, aged 64, a country rector, fond of literary pursuits, consulted me on October 2nd, 1857, on account of some troublesome affection of the rectum. He was a tall man, pale and feeble in appearance, but represented himself as being in good health. His habit was rather costive, and he strained usually in defecation. His complaint was an urgent desire to relieve the rectum at inconvenient times, in church, usually just before and during the performance of divine service, notwithstanding an effort in the closet had previously proved ineffectual. The desire often came on at prayer time, and left him when in the pulpit. He was subject to it also when attending public meetings, and occasionally while riding in a railway carriage. When an inclination was restrained by a violent effort, it passed away without any action of the bowels following. He had been subject to this affection about a year, and during this period he had been sometimes free from it altogether for two or three weeks. It was more liable to occur when he was under some anxiety.

Some months previously, he had consulted a physician, who advised him to clear the bowel by an injection of warm water on Saturday evening, and to take a sedative pill on Sunday morning, before service, and he had derived some benefit from this treatment. I made a careful digital examination of the rectum, and also passed a bougie, but could find no structural change to account for the symptoms. Viewing the case as one of "irritable rectum" connected with an anxious state of mind, I prescribed an aperient pill to be taken on Friday evenings, to be followed, if the bowels were not well relieved on Saturday, by a castor-oil injection in the evening, and a suppository of soap and opium to be passed on Sunday morning, and at other times when he was like to be troubled. The dose of opium in the suppository was to be so regulated as to prevent drowsiness. He was also urged to disregard the desire as much as possible.

On November 6th following, my patient wrote to me from the country, stating that he had resumed his clerical duties, and had not been much troubled since adopting my suggestions.

A physician in Paris has lately produced a work on Railway Diseases. If this subject was written on by a surgeon, he would scarcely overlook two complaints which have certainly become more common since the introduction of this rapid mode of travelling—viz., "irritable bladder" and "irritable rectum." The frequency of the former may be inferred from the large sale of "railway conveniences," which are so graphically advertised; and no one who has witnessed the rush to the recesses during a brief stoppage of an express train at a station on a cold day will be surprised that nervous, fidgety persons, and those labouring under stricture and enlargement of the prostrate gland, who cannot ease themselves quickly, should be tormented by irritability of the bladder. Persons of this disposition are liable to suffer also from irritability of the rectum.

Case 9.—*Irritable Rectum.*—A gentleman, aged forty-five, enjoying tolerable health, and residing in the country, consulted me in September, 1855. He complained of seldom having a good and free evacuation, and of rarely feeling afterwards an adequate sense of relief. He stated that his fæces came away in lumps, and that he had the sensation on going to stool of an impediment existing in the passage. He had sometimes to go to the closet twenty times a day, voiding only small scanty lumps. He experienced most discomfort from an urgent desire to relieve the bowel when so situated as to be unable to resort to the closet, as when travelling by railway. He had been subject to this complaint many years, and it was increasing upon him. Purgatives rather aggravated it. On examination, I could find no structural change, and no tenderness within the rectum, and no irritability of the sphincter. I prescribed some chalk mixture, with sulphate of magnesia and cubeb powder, to be taken three times a day, and advised his giving himself a warm-water injection daily. He returned into the country, and I have since had no account of him.

Case 10.—*Irritable Rectum.*—A gentleman, about sixty years of age, of an anxious temperament and most punctual habits, engaged in business in the City, and residing twenty miles out of London, about a mile from a railway station, after the usual relief at home in the morning, is constantly teased just as he is leaving his house, or after his arrival at the station to meet the train, by a feeling of his rectum being insufficiently emptied. If time admit of his again going to the closet, he voids usually one or two lumps, after which the disagreeable sensation ceases, otherwise he is annoyed by it during his journey to town. On getting to his counting-house and to his occupations, the desire usually passes off without any action of the bowel. This gentleman derived relief from clearing the rectum by an injection of warm water just before starting. When the complaint first troubled him there was no closet at the station, but since one has been put up, he has been much less subject to it.

The circumstance last mentioned shows how much this affection is dependent on an anxious, fidgety state of mind, against which patients may often successfully struggle.

Morbid Sensibility of the Rectum.

Several cases have fallen under my notice in which uneasiness has been experienced at a particular spot in the rectum, being complained of chiefly during, or after, defecation. The fixity and sometimes severity of the pain, and its aggravation from pressure, have naturally led to the suspicion of the existence of some lesion in the mucous membrane, such as an ulcer; but on careful examination, no breach of surface has been discovered, nothing, except in some instances, slight elevations and increased redness, and vascularity at the spot affected. The complaint consists chiefly in an exalted sensibility of the nerves of the part, but the alterations in appearance just mentioned, seem to indicate that there is also some slight and superficial structural change. In a few instances I have found the morbid sensibility to occur after some previous affection which had been cured by an operation. The remedies for the complaint are chiefly local. Sedatives, such as opium and belladonna introduced into the rectum, often give relief, but more permanent benefit is derived from applications calculated to alter the character of the part, such as the solid sulphate of copper, or a solution of the nitrate of silver applied to the spot through a speculum, and mercurial ointments.

Case 11.—*Morbid Sensibility of the Rectum.*—In the spring of 1857 I saw, in consultation with Dr. Randall, of Portman-street, a French gentleman, aged twenty-six, a tall, healthy-looking man, engaged in mercantile business, on account of a painful affection of the rectum, to which he had been subject for two years. He complained of being troubled with a heat, or burning sensation in the bowel, experienced always after defecation. He suffered from it also at other times, indeed he was seldom free from uneasiness. The sensation was increased after taking wine. It first occurred after an attack of gonorrhœa, for the cure of which he had taken largely of copaiba capsules with iron. He had consulted several eminent surgeons in Paris, but had not been able to get relief. The seat of uneasiness was a spot about an inch within the anus. On careful examination I could discover no lesion of the mucous membrane, only two small papillated eminences. To these I applied the solid sulphate of copper, and advised the daily application of the mild ointment of the nitrate of mercury, and his taking a gentle aperient of confection of senna with sulphur. Dr. Randall afterwards informed me that our patient pursued this treatment for two days with the desired benefit, when he was suddenly summoned to Bordeaux, since which he had not been heard of.

Case 12.—*Morbid Sensibility of the Rectum relieved by Local Treatment.*—In 1857, a gentleman, about sixty-five years of age, in good general health, leading an active professional life, consulted me respecting a troublesome pain in the rectum, to which he had been subject about two years. It appeared that some years previously he had suffered from piles, and had undergone two operations for their removal, since which he had been free from the hæmorrhoidal complaint. His bowels were regular, and he passed no blood at stool. The pain complained of was described as of a dull, aching character, and though not severe, proved very annoying. It occurred generally after a relief from the bowels, lasting an hour or two, but it troubled him also at other times, varying in duration and degree on different days. He had been repeatedly examined for the discovery of the cause, and about a year previously, under the supposition that the pain was dependent on an internal fissure or ulcer, an incision was made into the mucous membrane, but without affording any relief. The pain was referred to one particular spot a short distance within the rectum on the left side, and on examination with the finger, pressure at this spot caused the usual pain, and left a dull sense of uneasiness there afterwards. On introducing a glass speculum, I observed a small red patch in the mucous membrane at the part corresponding to the seat of pain. The patch did not resemble an ulcer. There was no breach of surface, and when the part was touched or rubbed no bleeding ensued. The spot was slightly elevated, and of a redder colour than the surrounding mucous membrane. I touched it with the solid sulphate of copper, and after an interval of three days applied a strong solution of the nitrate of silver (two scruples to the ounce). As benefit appeared to be derived from the treatment, the latter application was repeated four times, at intervals of three or four days. My patient then left London for his autumnal holidays, and on his return at the end of two months reported that he had experienced considerable relief, and had not been at all annoyed by the pain, though he was still conscious of a tender spot within the rectum. Some months later, he informed me that he was still reminded occasionally of his complaint, but that he suffered no material annoyance from it.

I could add to these cases of morbid sensibility of the rectum, having preserved brief notes of some others very similar, but the two related will be sufficient to show the character of the symptoms and the treatment calculated to relieve them.

Neuralgia of the Rectum.

The two forms of nervous affection already described would be included by some writers under the general term of *neuralgia*, the sensibility of the rectum being in a measure perverted or augmented; but it will be remarked, that in the first of them no actual pain is experienced—there is merely an irregular and often causeless desire to evacuate the part; while in the second, the uneasiness consequent upon the augmented sensibility is either produced or aggravated by friction and pressure. In true neuralgia of the rectum, the pain is severe, but quite independent of contact. There is no tenderness.

CASE 13.—*Obstinate Neuralgia of the Rectum.*—In May, 1855, Mr. B——, a tall, strong, healthy-looking man, aged thirty-six, a lawyer, of abstemious habits, consulted me on account of a most troublesome and annoying affection of the rectum. He complained of suffering from a dead, aching pain high up on the right side of the bowel. The pain was constant, but varied a good deal in intensity, and it was often so severe as to disturb his rest at night. He always referred the pain to the same spot, either externally deeply seated in the pubic region, or high up inside the rectum. His bowels were regular, and his complaint was not aggravated by their action. He had been a sufferer in this way for more than two years, during which time he had been under the care of an hospital surgeon of considerable experience, who, after trying various remedies, at length advised the division of the sphincter muscle. On examination, I found the anal aperture healthy and the sphincter free from irritability, and on using a speculum, I could find no ulcer or sore, so that I gave no encouragement to the operation. A full-sized bougie passed a considerable distance without difficulty, and without causing pain on reaching the upper part of the rectum. He had made excursions into the country, and had travelled on the Continent, without any permanent beneficial result. His suffering was only slightly diminished during active walking exercise. The only remedy from which he had derived any relief was the injection of a solution of the extract of opium. On using this in the morning after an action of the bowels, the pain was lulled, and he was able to attend to business. Without this remedy, the pain was so severe as to make him uncomfortable, restless, and unfit for professional occupation. Finding that he derived slight relief from the pressure of a bougie, I advised his wearing a long plug, but as this did not reach the part affected, it was of no service. I tried successively the carbonate of iron in large doses, the liquor arsenicalis, and the oleum terebinthinæ, but without any good. Quinine and steel he had already taken with no benefit. The tincture of aconite was also taken without effect. It was suggested that the pain might be dependent on an exostosis in the pelvis pressing on a nerve. Nothing of the kind could be detected, but he was advised to take the iodide of potassium on the chance of getting relief. This gentleman, after remaining under my care some months, ceased his attendance. I have since heard indirectly that his trouble still continues.

CASE 14.—*Troublesome Neuralgia of the Rectum relieved by Treatment.*—An officer in the army, aged twenty-four, on duty at Chatham, a stout, muscular, healthy-looking man, consulted me in October, 1857, on account of a burning sensation in the rectum, which had troubled him more or less for three years. He referred his uneasiness to no particular spot, except that it was confined quite to the lower part of the bowel. It did not seem connected with the functions of the part, but it troubled him almost daily, coming on at uncertain times. He was occasionally free from uneasiness for a whole day. The complaint was aggravated by drinking wine or spirits. On repeated careful examinations I could find no piles, nor fissure, nor any lesion to account for the symptoms, and there was no irritability of the sphincter muscle. He had been under the care of several surgeons, but no treatment had afforded him the least relief. I gave directions for the regulation of his diet and bowels, and recommended the local application of mild citrine ointment with extract of belladonna; but no benefit resulted. I subsequently prescribed quinine-and-steel pills, and the use of a lotion of the oxyde of zinc and dilute hydrocyanic acid. This treatment afforded him considerable relief. He left Chatham on leave, and spent two months in Ireland. On his return at the end of December he was not quite so well, and stated that the lotion had lost its influence. I made further alterations in the treatment, but the patient shortly ceased his attendance, being ordered to India.

In these two last cases the pain was *not* characterized by paroxysms, or by suddenness of attack and disappearance, nor by any regular intermittence such as is often witnessed in neuralgia; nor was the uneasy sensation of an acute kind; but it was a continuous, enduring pain, sufficiently severe to interfere seriously with the comforts and even the business of life. It must be observed, too, that the pain was in no degree mental; for the patients were not persons of an anxious, nervous temperament, and, unlike some of the former cases of nervous affection, occupation and amusement had little influence in mitigating their troubles. In neither of the cases could I discover anything which could shed the faintest light upon the cause of the neuralgia; there was nothing, therefore, to guide me in the use of remedies for permanent relief. Topical remedies of a sedative character allayed the pain, but did not strike at the root of the disorder.

The division of these nervous affections into three classes seems fully warranted by the cases which have been just related, and the distinction is calculated to prove a very useful guide to treatment. But it is probable that in some instances it will be difficult to refer nervous complaints of the part to either group, morbid sensibility and neuralgia being so combined as to prevent any strict classification.

Grosvenor-street, 1858.

ON A CASE OF TRIPLETS: ADHESION OF PLACENTÆ; HÆMORRHAGE, RECOVERY OF THE MOTHER; DEATH OF THE CHILDREN ON THE SECOND AND THIRD DAY AFTER DELIVERY.

By **Wm. Webb**, M.D., Wicksworth, Derbyshire.

I was called, at about half-past five in the morning, January 31st, 1858, to attend Mrs. P——, aged thirty-one, the wife of a miner, residing in this town, in her fifth confinement. She is at best very pallid and chlorotic in appearance, extremely nervous, and has suffered previously from attacks of hæmorrhage after labour, which have endangered her life. On the last occasion when I attended her, the uterus exhibited, after the removal of the placenta, great want of contractile power, and the discharge of blood was very excessive. Several of her relatives have, I understand, suffered from adhesion of the placenta, and hæmorrhage; and I have myself seen a sister of hers in the most feeble condition from loss of blood after labour.

On examination per vaginam, I felt a bag of membranes protruding through the os uteri, which was dilated to the full extent. When pain occurred, I ruptured the membranes, and there was expelled directly a living male fœtus of between seven and eight months' growth. In ten minutes, another pain enabled me to reach a second set of membranes; these I also ruptured, and a second living male child was speedily born. Immediately succeeding the birth of this fœtus, I was somewhat astonished and alarmed at a sudden rush of blood from the uterus, which completely deluged the bed, brought on a state verging upon syncope, produced great nervous irritability, and placed the life of my patient in imminent peril. After administering stimulants, applying ammonia to the nostrils, and carefully adjusting a bandage to the abdomen, I introduced my hand into the vagina, when it impinged upon, besides coagula, a third set of unruptured membranes. I broke through these, and a third fœtus, much larger than the others previously born, was directly ushered into existence. Alarming hæmorrhage again set in, and I immediately re-introduced my hand, when I found the placentæ common to the two children first born firmly adherent to the uterus (fundus) for a very considerable extent; while the placenta of the third child was lying unattached in the uterine cavity, together with a large quantity of semi-coagulated blood. I tried in the most gentle manner to remove the attached placenta by carefully peeling it off from the uterus with my index-finger; but to no avail; and was at last obliged, very reluctantly, to remove the greater portion, and to leave some little masses, which were so firmly adherent as to render it impossible to remove them without injury to the uterus itself, still attached. The placentæ being separated, a contraction came on after the administration of a stimulant, which expelled my hand and the uterine contents. My patient was now in a distressing state, consequent upon the large sanguineous loss. Transfusion suggested itself; but being unable to leave, I gave stimulants and restoratives most liberally, and was rewarded in a few hours by observing a more favourable and satisfactory condition.

The funis of the fœtus first expelled measured eleven inches and a half; that of the second, twelve inches and a quarter; and that of the third, fourteen inches.

Two of the children (those first born) died on the second, and the third on the third, day after delivery.

The after-treatment consisted in the constant use of a bandage; in attending to the state of the uterus and vagina during the evacuation of the putrescent matter from the retained portions of the placenta, by frequently syringing with warm water; in giving copious supplies of beef-tea, brandy, and port-wine jelly; and in the exhibition of tonics and mineral acids.

Feb. 20th.—Mrs. P—— left her bed to-day, and I consider her now convalescent.

Remarks.—From the elaborate statistics of Dr. Churchill of Dublin, founded upon the record of numerous cases which have happened in the practice of the most eminent accoucheurs in Britain, Germany, and France, it appears that one case of triplets occurs in about every 5840 labours. Notwithstanding the rarity of the case, I should not have considered it worthy of publication, but for the dangerous complication of hæmorrhage which unfortunately attended it. This may have been due partly to the general tendency and hereditary hæmorrhagic disposition on the part of the patient; partly to the shortness of the umbilical cords in the two children first born, the precipitous expulsion of these, and the separation thereby of a part of the morbidly adherent placenta. To have removed the entire placental mass, and have risked the liability to injury of the maternal structures by such practice, would, it appears to me, in this case have been most unjustifiable and improper; and although some authorities insist strongly upon the extraction of the entire placenta, in consequence of the liability of absorption of the putrescent material, I should be disposed, from the success in this instance, to adopt in any similar case a similar course of treatment.

ON A CASE OF LIGATURE OF THE EXTERNAL ILIAC.

By **J. R. Ede**, F.R.C.S.,

SURGEON TO THE ISLINGTON PAROCHIAL INFIRMARY.

Jesse W——, aged forty-six years, was admitted into the Islington Parochial Infirmary, on the 9th of October, 1857, complaining of great pain of the left leg, so much so as to interfere with his walking. On examination, I found all the veins very much varicosed, and about two inches below Poupart's ligament there was a swelling about the size of a large walnut, having a strong impulsive action. This swelling had existed, according to his own statement, for nearly three years; at first it was much smaller, but since last May (1857) it had rapidly increased. He accounted for its origin by his having slipped whilst going up a ladder. Pressure on the femoral just above the tumour immediately reduced its size and pulsation; this convinced me that it was aneurism of the femoral artery. I represented to the patient his uncertain condition, and the necessity for performing an important operation—that of placing a ligature on the external iliac, to which he readily consented.

My friend Mr. Erichsen saw the patient with me after I had determined on the mode of cure, and quite sanctioned the procedure, as the only justifiable course to pursue. The patient was ordered to remain in the recumbent position, and to have dry unstimulating diet; and on the 28th of October, after he had been placed under the influence of chloroform, the operation was performed by me, in the presence of Mr. Erichsen, his house-surgeon, and my house-surgeon. The steps of the operation were in accordance with the plan laid down by Liston. At the end of fourteen days the ligature came away, and the patient did not have an unpleasant symptom. At this period (March, 1858), four months after the operation, he is in good health, and can walk three or four miles without any inconvenience, being quite relieved of the varicose veins, and the aneurismal tumour has quite disappeared.

I have reported the foregoing case on statistical grounds, as I think every operation of importance, more especially where the patient's life is at stake, whether successful or otherwise, should be made known to the profession.

Hemingford House, Barnsbury, Islington.

ON THE RELATIVE POSITION OF THE NERVES AND VESSELS OF THE LIMBS.

By Burton Brown, M.D.

It has long been known that in the intercostal spaces the nerve lies on the more exposed part of the space, while the vessels are well protected by the lower border of the rib; and this has been accounted for on the ground that injury to the artery would be more detrimental to the health of the individual than injury to the nerve. This remark has never been employed to explain the relative position of the large nerves and vessels of the limbs, although it is the rule here as elsewhere that "the nerve lies on the more exposed side." And this remark may materially assist the memory of practitioners who enjoy few opportunities of refreshing their anatomical knowledge, on a subject rather difficult to remember, for at first sight it would appear that the nerve was situated sometimes to the outer side of the vessels, sometimes to the inner, without any definite arrangement. But if we consider the lower extremities, it will be seen that (with one exception, the anterior tibial on the foot) a large nerve lies always to the outer side of the vessel—e. g. the anterior crural nerve and femoral vessels, the popliteal nerve and vessels, &c.; and this is because the two legs can never be separated far, so that the inner side of each is protected by the other, and the outer is more exposed. On the foot, however, which is habitually turned outwards and separated from its fellow, the nerve is placed to the inner side of the vessels, this side being directed forwards and most exposed to injury.

The upper extremities are so situated that they can only be placed side by side from the elbow downwards, and then in a constrained position, so that in this part of the body, the vessels do not run nearest the median line of the body but next that of the limb, and the nerve lies on the outer side of the vessels, when the latter are on the outside of the arm, as in the case of the radial nerve and vessels, and to the inner side when the vessels course along the inner side of the limb, as in the case of the brachial and ulnar arteries.

May, 1858.

REPORT OF A CASE OF ADHESION OF THE LABIA AFTER CONFINEMENT.

By Edward L. Falloon, Esq., M.R.C.S. Eng., Liverpool.

An elderly lady brought a young woman to my study, stating that she had become large of late, and fancied she had a tumour. This person had been attending with me a case of uterine disease, and thought this a similar case. I appointed to see her at her own residence next day, which I accordingly did, and gathered the following history:—

Married upwards of two years; became pregnant soon after marriage, and engaged a medical practitioner to attend her, whose services, however, were not obtainable at the time they were required. Labour came on rapidly, and the poor woman had no one near her but her mother. She states that all went on well; no abrasion or tearing took place so far as she knew, and she made a good recovery. Six weeks afterwards she returned to her husband's bed, when it was found that no connexion could take place without intense pain, causing him to desist, and all future attempts met with a like result. Some months passed away, and about June or July last attempts were renewed, but ineffectually; and so matters remained up to January last, when she was induced, after much persuasion, to allow me to examine her. She presented the appearance of a woman six or seven months advanced in pregnancy, but she stoutly denied the possibility of any such thing. The appearance of the parts was peculiar; perfect union of the labia had taken place from below upwards, where there was a small opening just sufficient to admit the top of the little finger, and that with pain; at the junction with the perinæum there was a cul-de-sac, having no communication with the vagina. The adhesion was perfect, no mere false membrane, but a thick substance. Happening to have my pocket-case, I at once passed a director down into the cavity of the vagina, and then passed one blade of the probe-pointed scissors into the cul-de-sac, and rubbed on the groove until the metal could be felt, and then cut right up. The bleeding was very great per saltum from both sides; pressure and cold failing to check it, I was obliged to put a ligature on both arteries, no easy matter without a proper assistant: I then passed a sponge inside the reflected labia, and passed a T-bandage over all.

I then directed my attention to the tumour, and on auscultation could hear distinctly the pulsations of the fœtal heart, enabling me at once to convey the startling intelligence that the tumour was movable, *very benign*, and capable of removal in the natural manner, now that the way was happily made clear, disclosing at once the remarkable physiological fact that pregnancy may take place without consent, direct contact, or connexion; for I judge that the pain produced by the effort would prevent even "consent." There must have been abrasion at the time of her confinement, and consequent swelling, causing the labia to meet; adhesive inflammation then set in. The pain produced by any movement of the body rendered rest and quiet necessary; and thus the adhesion became organized and firm, having existed for thirteen months. My patient was up at the end of January, and was doing well. The infant could be felt quite plainly; and she is now convinced that her tumour was a living one. The case is instructive, and as far as my experience goes, unique.

Shaw-street, 1858.

REPORT OF A CASE OF OBSTINATE CHRONIC RHEUMATISM CURED WITH THE SULPHUROUS VAPOUR-BATH.

By James Williams, M.D., Woburn, Bedfordshire.

John D——, of Aspley Heath, a labourer of about sixty years of age, has been much exposed to weather during the greater part of his life. I have known him some years as a constant sufferer from rheumatism of a most obstinate and intractable character, though he has been frequently under medical treatment, and that, too, of all the neighbouring practitioners and public institutions in the county. His case being considered hopeless, he was obliged to give up ordinary labour, and lately he had taken an acre of ground upon which to amuse himself and eke out a bare subsistence, his nights being spent in restlessness and pain, and the little labour he was capable of pursued under constant pain and misery.

The principal parts of the body affected were the feet and ankles. He had, however, pains and soreness in the shoulder, back, &c. These pains frequently moved about, and were not always present; they were sometimes in the hands. His general health was unimpaired, though the feet were constantly swollen, with great turgidity of the bloodvessels, rendering them partly varicose. The ankles are nearly stiff, and have been so for about two years. This circumstance made walking extremely painful and difficult, and if by chance he stepped upon a stone or an unlevel surface, the pain was so great as to cause him to almost sink upon the ground.

Amongst other remedies, I had tried to relieve him with colchicum, alkalies, lotions, embrocations, &c., which were not of the least service, and thus the case was given up. Some time after this a benevolent lady in the village applied to me on his behalf to know whether or not the sulphurous vapour-bath used by myself would relieve him, to which I replied in the negative. However, as she very much wished a trial to be made, I therefore agreed to give him a chance. I commenced with three baths, allowing an interval of one day between each. He was well steamed for about twenty minutes, and then showered with cold salt water before he left the bath. This practice I always adopt, as it seems to brace up the skin, and thus to fortify the system from a too relaxing action of the vapour. After these three baths he seemed much relieved, and the stiffness of the ankles considerably diminished. It now occurred to me that the principal disease being situated in the feet, the local application by means of a steam-bag would be sufficient to meet the requirements of his case, and it was consequently adopted. This mode of application was of no service; indeed he said he felt worse in his health, and therefore at his particular request returned to the general vapour-bath and shower afterwards. I gave him in addition, as he had a good deal of red sediment in his urine, a little bicarbonate of potash and tincture of colchicum, in a solution of the Heath cottage sulphurous water from the spring near Leighton Buzzard, twice a day. This he continued until he had had in all about seventeen sulphurous vapour-baths, with an interval of a day or two between each bath.

His recovery was progressive and steady, and in the course of about six weeks he had regained entirely the use of his ankles, could sleep soundly at night, and labour without pain or inconvenience. No wonder, then, that he presented himself at my surgery one morning, with a face beaming with gratitude, to express his thankfulness at being "perfectly cured." I must say that I had no idea that such a result could follow in a case so obstinate as his. The patient has a ruddy complexion, and is, no doubt, of an inflammatory habit of body. Here then is the clue to our success. The use of this sulphurous water has been of marked benefit in rheumatism, and when conjoined with the vapour-bath, or made the basis of the steam, no doubt it acts as a great purifier of the blood, and by the free perspiration induced relieves the system of many impurities, which, circulating in the blood, are deposited in the various tissues, particularly the muscles and ligaments of large joints, giving rise to painful contraction in the muscles, and impediments to free action when deposited about joints.

Some persons may suggest that the potash, colchicum, &c., were the principal agents of cure in this case. This, however, may be safely refuted by stating that it was freely given, and tried in all its forms for years, with no benefit; in short, the case was not relieved at all, except by the use of the sulphurous vapour-bath.

While upon this subject, I must express my regret at the falling off in the use of baths generally. Doubtless, many obstinate cases which now fall to the care of quacks and other pretenders might have been cured by orthodox practitioners with the aid of baths. I look upon the vapour bath as one of our most potent weapons in most chronic and many acute affections, and skin diseases, especially those where dryness and great irritation exist. I have lately cured a very obstinate case of scrotal herpes, in a gouty subject, where dry vapour, lotion, ointment, and other remedies were of no avail. This case, however, will more properly form the subject of a separate paper. It should be remarked, that though upwards of three months have elapsed of trying changeable winter weather, the rheumatic case continues a good and perfect cure, no return of the symptoms having taken place, the patient being able to attend to his ordinary daily labour, and walk miles to and from his work.

My vapour-bath consists of a small wooden chamber, about four feet by three, and five feet high; it has doors which open and close like a cupboard; it has also a perforated zinc box fitted in the top, closed by a lid, which, when partially removed, acts as a valve to allow the exit of superabundant steam; this opening admits of water being poured from a large jug or other vessel over the patient while sitting in the vapour below. There is also a small zinc box, with a perforated lid fitted to the bottom of the bath, this receives the condensed steam or shower, and is emptied by a small tap underneath the floor. It is altogether very complete and inexpensive; and I shall feel much pleasure in showing it to any of my medical friends, should they think it worthy of examination.

Aspley Guise, June, 1858.

ON A CASE OF BRONZED-SKIN DISEASE OF THE SUPRA-RENAL CAPSULES.

By R. Richardson, Esq., L.F.P.S., Glasgow.

As there are few cases of recovery from this formidable disease on record, I am induced to forward the following. I shall here simply state facts, without entering at great length into all the details. In so doing I shall take the reports from my note-book monthly, as the period of treatment extends to about twelve months.

October 11th, 1854.—Mr. H. H——, a farmer, married, and the father of a large family; of very temperate habits; has always enjoyed good health, until some weeks back, when he felt his strength failing. He was greatly emaciated. His ancestors were "all liable to complaints of the kidney," such as gravel, &c. His father died of diabetes after labouring under that complaint for three years.

Present State.—Complains of great weakness, and inability of any exertion of mind or body; loss of appetite; nausea and vomiting; breath peculiarly offensive; cough, expectorating sometimes freely; bronchial respiration, sibilant râle; tongue white; pulse 98, feeble; pain in the loins increased on pressure on the left side; urine pale—specific gravity ·15, no albumen; bleeding of the nose sometimes; skin of a dark hue, having the appearance of a mulatto, on the face, front of the arms and thighs, and superior part of the chest; very dark on the hands; finger-nails pale; the conjunctivæ pearly white; enlargement of the lymphatic glands in the axilla, and about the clavicles and in the groins; no tinge of bile in the urine; inside the lips dark.

Some of his friends have been persuading him that he has the jaundice; but the whiteness of the conjunctivæ, the absence of bile in the urine, and the paleness of the finger-nails, convinced me at once that he was labouring under disease of the supra-renal capsules. He was ordered the following mixture:—Dilute nitro-muriatic acid, two drachms; spirit of nitric ether, three drachms; infusion of quassia, seven ounces and a half; mixed: a tablespoonful to be taken three times a day. Mercury pill, a scruple; compound extract of colocynth, two scruples; mixed; to be divided into twelve pills, two to be taken every other night. Mustard poultice to be applied to the chest. Diet: milk, broth, rice, arrowroot, &c.

November 1st.—Nausea and vomiting; shortness of breath; expectorating freely; pain in the limbs in every other respect the same. To have an emetic twice a week, and to continue the mixture and pills; to have a blister applied to the chest.

December 2nd.—Cough and breathing better, but still no appetite; bad taste in the mouth; bowels acting freely with the pills; urine, specific gravity ·18; pulse 82; tongue clean; spirits depressed; skin unchanged. To repeat the medicine.

Jan. 1st, 1855.—Better in every respect; appetite improving.

Februry 2nd.—Better; pulse 84; urine, specific gravity ·20; skin not quite so dark on the face; the glands in the left axilla much enlarged To repeat mixture and pills.

March 3rd.—Still improving; pulse 79; urine, specific gravity ·20; cough much better; glands much enlarged in the left axilla; an abscess forming on the left elbow. To repeat the medicine, and to take a spoonful of cod-liver oil three times a day.

April 2nd.—Much better in health and spirits; the abscess in the elbow, and three or four in the axilla, were lanced. The patient complained of pains in the loins and hip-joint. To have mustard poultice to the loins, and to continue the medicine.

May 3rd.—Still improving; abscesses discharging freely; pulse 74; urine, specific gravity ·20;

rapidly gaining strength; skin recovering its natural colour, Galbanum plaster to be applied to the sores; to continue the medicine and cod-liver oil, and to have a pint of porter daily.

June 3rd.—Better in every respect; less pain in the loins since the abscesses began discharging; is now regaining flesh. To continue the medicine and cod-liver oil; diet as before; to have meat every day.

August 15th.—Some of the abscesses discharging; is very free from pain; skin resuming its natural colour everywhere except the axilla. To repeat the medicine and cod-liver oil; diet as before.

Sept. 20th.—Some of the abscesses discharging; the enlarged glands above the clavicles disappeared; general health good. To repeat the medicine as before.

October 15th.—The abscesses have all healed; feels quite well; the skin has perfectly recovered.

His anæmic state suggested to me that he had discrasia, and that the abscesses were of a strumous character, so that I am inclined to think he had tubercular deposition in *one* supra-renal capsule, if not in both. The abscesses discharging caused a revulsion in this case, as he rapidly improved after they had commenced discharging, under the nitro-muriatic acid mixture and cod-liver oil, with nutritious diet. Three years have elapsed since the patient was under treatment; his health has been good ever since, without fluctuating.

Rhayader, Radnorshire, June, 1858.

OSSIFICATION OF THE AORTIC VALVES, WITH ANEURISMAL DILATATION OF THE AORTA.

By Jabez Hogg, Esq., M.R.C.S.

Mr. Alfred N——, aged twenty-six, a commercial traveller, whilst on his journey in the country, in January 1854, was greatly alarmed by a violent fit of coughing, which ended in spitting blood. After some days' medical treatment he was sufficiently recovered to attempt a return home. The exertion reproduced the hæmoptysis. Upon applying the stethoscope, a tolerably loud valvular murmur over the upper part of the sternum, with a distinct bruit, was detected, which led me to believe in the existence of aneurism with hæmoptysis from pulmonary congestion. In three weeks he was convalescent. No further hæmorrhage gave me alarm, but his progress to health was slow, and the bruit might still be heard, although it was not so audible. He was, however, able to take out-door exercise in a very moderate degree until June, when he imprudently took a long walk and rode back on the top of an omnibus; this procedure, soon after his arrival at home, reproduced the cough and the hæmoptysis. The bruit increased, and the action of the heart was laboured and loud; a slight pulsation, with a vibratory thrill, was imparted to my fingers when pressure was made near the first and second rib to the right of the sternum. The patient now complained that this peculiar pulsation impeded respiration. Lung disease on the left side was apparent; nevertheless he was convalescent in about four weeks, but, continuing weak, I requested Dr. Hyde Salter to examine him, who confirmed my opinion as to the existence of aneurism of the aorta with pulmonary lesion.

Towards autumn he had apparently recovered, and could take his daily walk with comfort. He now thought of turning his attention once more to business, but in February, 1855, was again alarmed by the return of hæmoptysis. From this attack he soon rallied, and enjoyed tolerable health throughout the summer. In November the spitting of blood once more returned, which the usual remedies arrested; the cough left him, and he experienced no further attack until the end of January 1857.

In consequence of his removal to Hackney, he next came under the care of Mr. Hacon, and this gentleman kindly furnished me with the following particulars of his last illness:—

"Early in February I found him suffering from hæmoptysis. The quantity of blood lost was small, not more than half an ounce at a time, and I do not think the whole quantity raised amounted to two ounces during the illness, lasting about a month. He was at this time emaciated and weak, but had hardly any cough. He complained of a sore spot on the upper part of the left side of the chest, from which he said he was sure the blood came. This pretty nearly corresponded with the situation of the cavity found in the lung after death. There was no perceptible dulness about this part of the chest, nor any expectoration beyond a slight quantity of mucus tinged with blood, which very soon ceased. At this time there was much palpitation of the heart, which could be felt over all the anterior parts of the chest. An abnormal pulsation was also very perceptible over the upper portion of the sternum. A loud 'bruit de sofflet' accompanied the heart's action, and masked the second sound of the heart; this bruit was also heard over the upper part of the sternum; and when the action of the heart somewhat subsided, the pulse was often intermittent and feeble, although during the hæmoptysis the intermittence had not been remarked.

Although he had some two or three attacks of hæmoptysis during the summer, he was well enough to walk short distances without inconvenience, and for many months prior to the last attack he had no hæmoptysis. In January of this year he had, however, a fresh attack, but the amount of blood lost was trifling, and entirely ceased after a few days' treatment, and in the early part of February he was much better, although he did not leave his room. In the middle of the month his breathing became affected, and he was unable to lie down. This difficulty rapidly increased, and for several weeks prior to his death he could only breathe by leaning forward, and resting his head on his hands, and even in this position he was, on several occasions, threatened with asphyxia; on one especially, when his face had become livid, his extremities cold, and his trachea filled partially with mucus, so that immediate death seemed inevitable, a slight alteration of his position caused him to rally, and he lived nearly a fortnight after. During the whole of this last illness he was able to take but little food, and he sank from exhaustion, the dyspnœa not being quite so distressing a day or two prior to his death, which occurred on the 25th of March."

Post-mortem examination thirty hours after death.—The body was much emaciated, and the extremities œdematous. The heart was considerably raised, the pericardium being distended with several ounces of fluid; there was evident enlargement of the heart; it contained a good deal of dark blood and fibrinous clots. On the left side there was evidence of recent pleurisy, with serous effusion; the left lung was large and gorged with dark blood, and there was a small cavity as well as pulmonary tubercles on several portions of it. In the right lung, which was smaller than the left, there was miliary tubercle, but not to the same extent as in the right. The mucous membrane of the trachea was of a dark mahogany colour.

The diseased appearances of the heart were—1st, enlargement; 2nd, ossification of the aortic valves; 3rd, aneurismal dilatation of the aorta.

The enlargement of the heart was both by hypertrophy and dilatation; all the cavities were enlarged, and the walls of the left ventricle greatly thickened. This was doubtless caused by the aortic constriction. The heart weighed, after the careful removal of all clots and blood, seventeen ounces. The ossification of the aortic valves was such as entirely to destroy their normal anatomy, and to convert the orifice into a narrow fissure. The valves were so contracted as almost to be effaced, and what was left of them was puckered, thickened, leathery, and almost cartilaginous in texture. The calcareous matter was deposited in large masses of dense fibrous tissue, having the consistence of cartilage; most of these were placed along the attached margin of the valves, converting it into a bony ring, but one of considerable size was quite free of the valves, fairly within the aorta, and projecting into one of the sinuses of Valsalva. Such a state of disease, while it admitted regurgitation, must chiefly have produced obstruction, and that of an extreme character.

The aneurismal dilatation involved the ascending aorta, and about two-thirds of the arch, from the valvular orifice to just beyond the origin of the left subclavian artery, where it rather suddenly ceased. It was of a very equable and cylindrical character, widest at the junction of the ascending sixth, with the arched portion, and there two inches in diameter. The dilated portion was also elongated, and measured from the root of the vessel to the origin of the left subclavian artery, four inches. There was nothing peculiar in the feel of the vessel, it appeared to be firm, elastic, smooth, natural, and of even and sufficient thickness, except the anterior surface of the horizontal portion of the arch, which was very thin. On cutting out a circular piece from behind, and looking to the inner surface of the vessel, it was found smooth, and in every way natural. The aneurism had contracted no undue adhesions with surrounding parts. From its situation and direction it must have pressed principally upon the right pulmonary artery, and the left bronchus, as they both lie beneath the arch. The right pulmonary artery was found in this situation, and so contracted as only to admit a pen-handle; it was contracted to a third of its natural diameter; a very small supply of blood must have been delivered to the right lung. The left pulmonary artery entirely escaped pressure, and must have been the vehicle of an unusually large column of blood, and thus an undue supply must have been thrown upon the left lung, while the pressure upon the left bronchus shut off the air, and kept the respiration of the lung in permanent arrears. This will account for the extreme congestion of the left lung, and for its being so much greater than the right. Some pressure must have also been exercised upon the cavæ, especially the superior. I should think that the urgent dyspnœa and death resulted from the pressure upon the roots of the lungs, and the consequent derangement of the supply of air and blood to them. It is difficult to account for the aneurism, for except at the point I have mentioned (just below the origins of the arteries from the arch), the walls of the aorta were perfectly healthy, no ossification, no atheroma, no divergence in any respect from the normal appearance, thickness or strength. Moreover, the valvular disease was not such as to produce distension, or to imply that the walls of the artery were subjected to any undue stress, but the reverse; such as would diminish the stress to which it would be subjected in health. For, on the one hand, the contraction of the aortic orifice would prevent the arterial volume of blood from being sent into the aorta at each systole of the heart, and the imperfect closure of that orifice would allow an immediate reflux and relief of the aorta the moment the ventricular contraction ceased.

These circumstances, together with the comparative youth of the patient, certainly makes the case peculiar. Although young, he had, however, lived somewhat fast; had drunk a good deal at one time, and "knocked about the country, and undergone violent and laborious exertion." The case is also somewhat confirmatory of Trousseau's opinion, that hæmoptysis is more frequently associated with disease of the heart than with pulmonary tubercle. The pulmonary tubercle was, in this case, subsequent to the disease of the heart, the patient having been examined four years prior to his death for lung disease, and none was then detected. It is somewhat remarkable, also, that the coats of the artery should have been quite free from all atheromatous deposit.

Gower-street, June, 1858.

THE HISTOLOGY OF THE SUPRA-RENAL CAPSULES.

By George Harley, M.D., F.C.S.

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At the present moment, when the connexion between disease of the supra-renal capsules and bronzed skin is attracting so much attention, I think one need scarcely apologise for bringing under the notice of the profession a contribution to their histology.

Within the last few months several physiologists have attempted to discover the function of the supra-renal capsules, and the relation which might exist between them and the chromatogenous function of the skin, by direct experiment, but without success. The results of my own experiments, as well as of those that have been published by other observers,[*] have convinced me that the problem is one more likely to be solved in the dead-house than in the physiological laboratory; and if such be in reality the case, a thorough knowledge of the healthy organs, both as regards their appearance to the naked eye and under the microscope, becomes of primary importance. So little attention has been hitherto bestowed upon the supra-renal capsules, either in the dissecting-room or at post-mortem examinations, that it is much to be feared that occasionally healthy organs are mistaken for diseased, while others but slightly affected are passed by as healthy. Any remarks, therefore, that may tend to remedy this evil, no matter however insignificant, can scarcely be looked upon as unimportant.

Supra-renal capsules are found in the bodies of all vertebrated animals. They are developed simultaneously with, but independently of, the kidneys. In the human fœtus at the second month, both organs are of equal volume. From the third month onwards an increasing difference is observed in their relative size.[†] It has generally been believed that after birth the supra-renal capsules diminish in proportionate bulk and activity of function with advancing years, and consequently they have been denominated fœtal organs. This opinion, however, is now losing ground, since it has been found that they do not become atrophied after birth, and that their growth is not so much even as arrested. In some animals they continue of the same relative size as the kidneys throughout life. In the cat I found that they increased in a greater ratio than the latter organs. In man, however, although they go on increasing in volume after birth, it would appear from the observations of Meckel that the ratio is much smaller than in the case of the kidneys; but it can scarcely be said that even in old age they become proportionately more atrophied than other organs. From these facts we may conclude that the supra-renal capsules have a certain function to perform in adult as well as in fœtal life.

The supra-renal capsules are usually two in number; occasionally, however, supernumerary ones are met with. Very recently I found four in a sheep. The supernumerary were considerably less than half the size of the normal capsules. It has been also mentioned by several authors that they are sometimes altogether absent. Their presence or absence being quite independent of the presence or absence of the kidneys, they would seem to have no direct connexion with the latter organs, for they do not even follow the displacement of them. In brainless monsters they are generally found deficient (Frey).

In the human subject they have a triangular form, which has been very pertinently compared to a cocked-hat.[*] They are sometimes, however, of an oblong form, or even flattened, and spread over the upper and anterior surface of the kidney, like a piece of paper. Dr. Ogle showed a good specimen of the latter kind at a recent meeting of the Pathological Society. Their shape is very various in different species of animals. In some they are almost quite circular, as in the rat; in others they are very much elongated, as in snakes; occasionally they are lobular, and resemble a compressed bunch of grapes, as is seen in the case of the frog.

In man the upper margin of the supra-renal capsule is convex, and about one-eighth of an inch in thickness; the lower margin is concave, and usually about a quarter of an inch thick. The left is generally narrower at its base, longer from above downwards, and larger than the right. They are on an average about two inches by one in diameter, and, according to Huschke, weigh from 80 to 180 grains. By comparing the relative size of the human supra-renal capsules, as given by Huschke, and of the kidneys by Clendinning,[†] I find that the weight of the former is to that of the latter as 1 to 18, which I think is much nearer the truth than that given by Meckel—namely, 1 to 28. The relative size of the capsules and kidneys varies very much in different animals. In the common guinea-pig, Frey[‡] gives it as only 1 to 4; while in the seal, Cuvier[§] found it to be no less than 1 to 150.

Externally the supra-renal capsules have a dirty-yellowish colour, not unlike that of powdered scammony. When cut into, they are seen to be composed of two different coloured portions. The central portion, which constitutes about one-third of the whole thickness of the organ, is of a dark-reddish hue when full of blood; when washed and freed from the latter, of a pale slate colour. In the centre of this, the medullary substance are several round or oval openings—the mouths of venous sinuses. The cavity, which some authors have described as existing in them, is produced by rupture of the tissue between the sinuses, either accidentally during the examination, or as the effect of disease. The medullary substance is bounded on either side by a margin of yellow substance, the internal border of which is of a pale straw, the external of an orange, colour. This, the cortical substance, has a somewhat fibrous appearance, and, although less firm to the touch than the internal medullary part, can scarcely be called friable. (These remarks, of course, only apply to quite fresh and perfectly healthy capsules.)

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[*] Brown-Séquard, Philipeaux, Gratiolet, Vulpain, Martin-Magron, and Virchow.

[†] Vide Kolliker, Frey, Leydig, &c.

[*] The left is more triangular in shape than the right capsule; the latter being often crescent-shaped.

[†] Quain's Anatomy, last edition, p. 816.

[‡] Cyclopædia of Anatomy and Physiology, Part xxxvii.

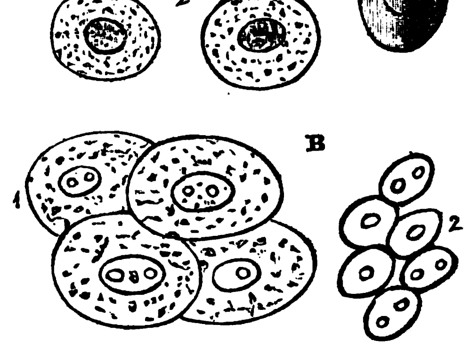
[§] Ibid.

When a transverse section of the supra-renal capsule is examined with a pocket-lens, the medullary substance appears of a somewhat bluish colour, becoming tinged with red as it approaches the cortical portion. In the centre, several openings, which were not before visible, come into view. The cortical substance, on the other hand, still retains its yellow hue; but, in addition, is seen to be streaked perpendicularly with red lines; an appearance due, as I shall afterwards have occasion to show, to bloodvessels. The fibrous nature of the cortical substance is readily recognised with the lens.

Microscopical Appearances.

Until within a few years ago, our knowledge of the minute structure of the supra-renal capsules was entirely derived from the results obtained by a microscopical examination of their juice and *débris*. In consequence of this limited method of investigation, the real arrangement of their tissues remained long unknown. And it was not until within a recent date that an observer (Ecker), more zealous than his predecessors, by examining thin sections, discovered that they possessed a minute structure scarcely excelled in beauty by any other organ of the body.

FIG. 1.



From the supra-renal capsule of the frog.—A, 1, Granules; 2, nucleated cells; 3, blood corpuscles. B, 1, Large nucleated cells; 2, free nuclei.

Before describing the appearance of their tissues, I shall first allude to the microscopical characters of their juice. For notwithstanding that the examination of the latter yields no clue to the arrangement of the component parts of the supra-renal body, it nevertheless affords us some interesting information.

On placing a drop of the expressed juice in the field of the microscope, it is seen to contain an immense number of round bodies of every imaginable size, between that of a large oil globule and the minutest visible speck. At first sight the appearance reminds one of that presented by a drop of new milk. On attentive examination, the smaller of the granules are observed to be in active movement; repelling and attracting each other in rapid succession. Amongst these molecules are seen ordinary oil globules and blood corpuscles. But besides these are a number of round pale-coloured cells, with granular contents. They look not unlike lymph corpuscles, but are somewhat smaller. The average, in the human subject, $\frac{1}{100}$ mm. ($\frac{1}{2500}$ inch) in diameter. In the juice of the supra-renal capsule are also found nucleated cells, filled with molecular particles. These cells occasionally, though not often, contain two nuclei. Besides these, there are nuclei that appear to be surrounded by molecular particles unenclosed in a cell-wall; and others where indistinct marks of a cell-wall are visible; which leads one to suppose that the cell-wall is either in the course of formation, or has been partly destroyed. The fully-developed nucleated cells, as well as the aggregation of granules round nuclei, measure about $\frac{1}{40}$ mm. ($\frac{1}{1000}$ inch) in diameter. In some the granules are pale; in *others*, very dark coloured. The cells, which were previously spoken of as resembling small lymph corpuscles, may possibly be nothing more than free *nuclei*.

Mr. Gulliver mentioned having found, in many of the ruminants, "the minute molecules less plentiful, their place being supplied by corpuscles somewhat resembling lymph globules in size, but often of a reddish colour, and occasionally of an oval figure."* The small granules and active molecules are particularly abundant in the supra-renal capsule of the rat. The peculiarity of these molecules is that they undergo, as pointed out by Gulliver, no change, when treated with acids and alkalies, until after a considerable lapse of time.

In order to study the structural arrangement of the component parts of the supra-renal capsules, very thin sections of the organs must be examined. Although healthy and perfectly fresh supra-renal capsules admit of being cut into thin slices with the knife, yet it rarely happens that the sections are sufficiently delicate to allow of their structure being well seen. On operating on fresh capsules, I usually obtain the best sections by cutting them with a razor under water. But by far the best method is to harden the capsule with chromic acid, and afterwards render the section transparent with glycerine. Those who have had to contend with the difficulties attending the microscopical examination of supra-renal capsules, will scarcely, I think, regard these remarks as superfluous.

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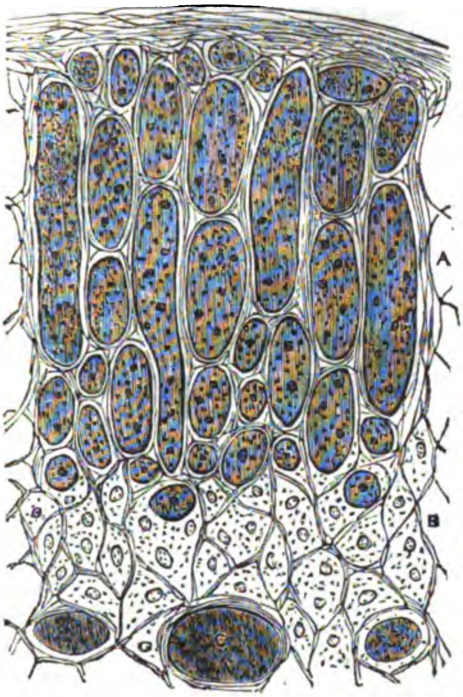
* Gerber's General Anatomy, translated by Gulliver, Appendix, p. 104.

When a transverse section of the human supra-renal capsule is examined with a low power of about eighty diameters, the cortical substance is seen to be composed of numerous cells, arranged in somewhat irregularly-sized rows; the rows of cells appear like a number of dark-yellow columns, placed perpendicularly to the surface. (Fig. 2, A.) The columns terminate somewhat abruptly at the margin of the medullary substance. (B.) The latter, when viewed with a low power, such as that just mentioned, presents no definite structure. Running along the centre of the medullary substance is a line of round or oval openings of various sizes, the mouths of the sinuses. (C C.)

FIG. 2.



Transverse section of a human supra-renal capsule.—A, Cortical. B, Medullary substance. C C, Sinuses.

If the cortical substance be examined with a high power of about 400 diameters, the cells constituting the rows will be found to resemble in size and general appearance those lining the tubuli uriniferi of the kidney. They differ from the latter very strikingly, however, in their peculiar colour. Each individual cell has an average diameter of $\frac{1}{50}$ mm. ($\frac{1}{1250}$ inch.) Their size varies but slightly. The minimum diameter, being about $\frac{1}{70}$ mm. ($\frac{1}{1750}$ inch), the maximum, $\frac{1}{40}$ mm. ($\frac{1}{1000}$ inch.) They consist of a cell-wall, granules, pigment, a nucleus, and a greater or less quantity of oil globules. Some authors speak of their peculiar yellow colour being dependent upon the amount of fat globules they contain. I think, however, that the fat globules only contribute to the colour. When floating free in the field of the microscope, the cells appear to be irregularly round; but when grouped together, they have a polygonal shape. Each cell possesses a nucleus, although it is not always visible without the employment of reagents.

The simplest and most beautiful mode of demonstrating the existence of a nucleus, is by colouring the cells with carmine. As this process of imbibition, as it is called, is quite new in England, indeed in any country, it being scarcely a year since it was employed for the first time in Germany,* I may briefly describe it.

"Imbibition" might be termed a process of natural injection. The principle upon which it is founded exists in the fact, that different animal tissues absorb and retain pigments with various degrees of avidity. Thus, for example, while granular tissues possess a special attraction for colouring matters, homogeneous substances display but a feeble affinity for them. And in the tissue composed of aggregated cells, different parts are coloured in various degrees of intensity. Thus the homogeneous cell-wall retains its colourless appearance long after its molecular contents have become deeply tinged, and the nucleus, which is usually the most granular part, has assumed a prominent dark hue.

The process of "imbibition" is very simple. A small quantity of pure carmine is dissolved in liquor ammonia. The solution is diluted with water, and thin sections, ready for microscopic examination, are kept in it during twenty-four or forty-eight hours. At the end of this time, the substance will be found thoroughly dyed and fit for use. I may remark, that attention must be paid to avoid having any gritty particles in the colouring solution. I would therefore recommend it to be filtered before the tissues are added. The carmine solution unfortunately putrefies very rapidly, but I find this is easily prevented by adding a few drops of alcohol, which does not impair its efficacy, unless in excess.

On examining some coloured preparations of the brain and spinal cord, kindly presented to me by Professors Gerlach and Welcker, I was struck, as every one must be who examines them, with the remarkable distinctness of the nuclei of the ganglion corpuscles. Thinking that the affinity for colouring matters might be especially characteristic of ganglion cells, and being at the time very anxious to discover a test by which these might be distinguished from the large caudate corpuscles occurring in the medullary substance of the supra-renal body, I tried the process of imbibition on a variety of tissues, and soon found that all cells with equally granular contents became tinged in a similar degree. While investigating this point, I was fortunate enough to find the process of imbibition a valuable aid in the examination of the supra-renal bodies. Through its means, it could be shown that all the cortical columns possessed a large nucleus. The nucleus appeared so very distinct in cells where before the colouring matter was employed not a trace of one could be detected, that I at first thought that the nucleus did not perhaps pre-exist in all the cells, but was merely the result of the treatment, the ammoniacal solution of carmine having caused the granules distributed throughout the cell to become aggregated together, and thus give rise to the appearance of a nucleus. On examining the cells attentively, however, I was able to satisfy myself that such an explanation was incorrect. The cell still retained its granular appearance, irrespective of the nucleus. While the cell, as I said before, has an average diameter of about $\frac{1}{30}$ mm. ($\frac{1}{1250}$ inch), the nucleus is of considerable size, measuring, on an average, $\frac{1}{133}$ mm. ($\frac{1}{3323}$ inch.) in diameter. The nuclei are generally round and granular.

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* As far as I am aware, Gerlach and Welcker were the first to employ it. P. S.—Since writing the above, I find that, in 1778, Gleichen describes a process of colouring infusoria by carmine.

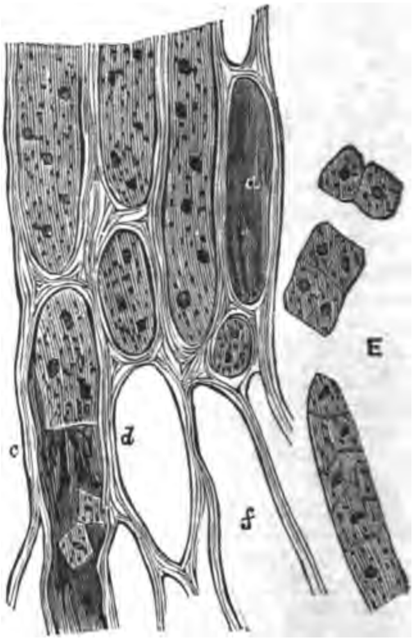
Arrangement of the Cells in the Cortical Substance.

Considerable difference of opinion exists amongst histologists as to the manner in which the cells are arranged. Mr. Simon thinks that the columnar masses which they form are a series of closed tubes lying perpendicular to the surface of the organ; while Kölliker, Frey, Ecker, and most other observers, describe the cells as being grouped together in a number of oblong vesicles, lying in parallel rows, but having no communication with each other. Mr. Gray, on the other hand, believes that the adjoining walls of the vesicles are sometimes removed by absorption, and thus give rise to tubular cavities. My own opinion regarding the arrangement of the cells may be given in a very few words, as it will be more readily understood by a glance at the woodcuts than by pages of explanation.

It appears to me that the contrary descriptions given by different histologists are more the result of variety in language than a difference of opinion. To the same structures the name tubes, sacculi, and vesicles have been applied. This variety of interpretation is easily accounted for. For even in the same section the cells may be seen arranged in the form of tubes, of saculi, and of round vesicles. Fig. 2 represents somewhat roughly this state of things.

In a good section the cells are seen to have a definite arrangement. They are grouped together, as represented in Fig. 2, in a number of larger and smaller masses. These lie in parallel rows, and give rise to a columnar appearance. Some of the cell-masses are small, and round, not greater than the diameter of a single cell. These are chiefly found at the external and internal extremities of the columns. Others of them are oval, like vesicles, and some are oblong, not at all unlike blind saculi. On the other hand, occasionally a cell-mass is found to extend almost throughout the whole thickness of the cortical substance, and to have very much the appearance of a tube with closed ends. Notwithstanding that the cell-masses vary so much in length, their breadth remains tolerably uniform, the diameter of the smallest being about $\frac{1}{60}$ mm. $\frac{1}{500}$ inch,) and of the thickest about $\frac{1}{20}$ mm. ($\frac{1}{500}$ inch.) Each cell-mass, as well as each column, is separated from the rest by intervening fibrous tissue. This is represented in Fig. 3. The fibrous tissue surrounding the mass of cells is most distinctly seen when the cells have chanced to fall out, as frequently happens in thin sections. (Fig. 3, *d*, *e*.) On tracing the fibres they are seen to arise from prolongations of the investing fibrous capsule of the organ.

FIG. 3.

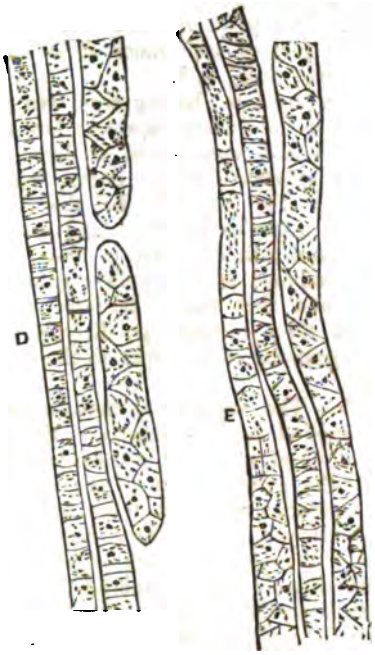


Portion of a transverse section of the cortical substance of a human supra-renal capsule. *a*, Empty loculus, with basement membrane. *d*, The same, without basement membrane. *f*, Fibres. E, Cells fallen out from the *loculi in* masses.

As was already mentioned, the cell-mass may take on the appearance of a tube. In good sections of the human supra-renal capsule it is not uncommon to meet with a single straight row of cells extending throughout the whole breadth of the cortical substance, and it is difficult to divest oneself of the idea that it is a tube. This appearance is represented in Fig 4. In the specimen from which the figure D was copied, there were two single rows of cells lying parallel to each other. The cells were of quadrilateral form, and the whole structure reminded me forcibly of two rows of bricks. In the case in question, the intervening space between the rows was about half the breadth of the cells, and it looked exactly like the cavity of a tube bounded on either side by a row of epithelium cells, such as is seen in the tubuli uriniferi of the kidney. (see Fig. 4.)

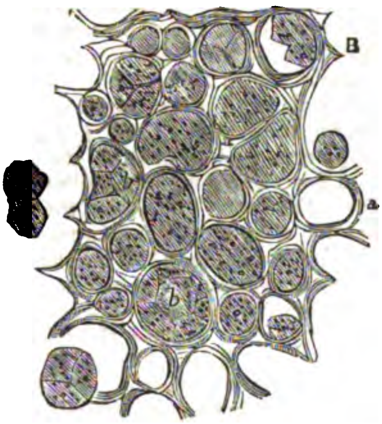
On one occasion I found a single row of cells extending from the one margin of the cortical substance to the other. It contained upwards of thirty cells. It not unfrequently happens that one meets with a column, partly containing a single, and partly a double row of cells. Such an one is represented in Fig. 4, E. The walls enclosing the single and the double row of cells are perfectly continuous with each other, showing that the appearance is not due to the accidental union of two cell-masses. Indeed, I have never met with any appearance which would lead me to believe that one cell-mass communicated with another, either directly or by a duct. It sometimes happens that the cells in the single rows are not closely packed together, but are separated by irregularly-sized intervals. This appearance may, however, be due to the process of preparation, as I have not seen it in sections of the fresh capsules. In order to ascertain if the columnar cell-masses, having a close resemblance to tubes, were not actually what they looked like, I made sections of the cortical substance at right angles to the direction of the columns. These transverse sections are very characteristic. The ends of the columnar cell-masses appear as round or oval spaces filled with cells, as seen in Fig 5. The oval or round spaces containing the cells measure from $\frac{1}{40}$ to $\frac{1}{13}$ mm. ($\frac{1}{1000}$ to $\frac{1}{325}$ inch) in diameter; they usually contain from one to five cells. They are in some parts very closely packed together; at others loosely scattered about, leaving interlocular spaces of various sizes and shapes. Sometimes in thin sections the cells have fallen out, and left empty cavities. (Fig. 5, *a*.) At other times they have only in part fallen out, and those remaining are seen partially detached from the walls of the cavity. In uninjured specimens it is easily seen that the cells completely fill the entire loculi, be they small or be they great, which it will be remembered, is a very different state of things from what is found in true tubes. When, for example, a transverse section of the tubuli uriniferi is examined, the ends of the tubes are not found to vary greatly in diameter in the same part of the organ. They are never so small as to contain but one cell, as in the case of the supra-renal capsules, neither are they ever completely filled with cells. There is invariably a free space in the interior of each tube, and around this central cavity are arranged the epithelial cells. Further, the cells are only one row deep, and regularly ranged in a circle upon the membrana propria. As the columns of the cortical substance of the supra-renal capsules, when seen in transverse section, present none of these characters, I do not think that they deserve the name of tubes. (See Fig. 5.)

FIG. 4.



Columnar cell-masses having the appearance of tubes from the human capsule.

FIG. 5.



Section across the columnar cell-masses. *a*, Empty loculi. *b*. Loculi completely filled with cells, and having no central opening.

In describing the cavities containing the cell-masses, Kölliker speaks of them as mere loculi in the stroma of the organ, possessing no limitary membrane. With all due deference to the opinion of my former teacher, which I have much cause highly to appreciate, I must acknowledge that I think Ecker and Frey are correct in stating that the loculi are lined with a homogeneous membrane. I have been able to demonstrate it in the longitudinal section of the cortical substance by carefully washing away the cells. The basement membrane, although exceedingly delicate, is, however, distinctly visible, especially at those points where, when accidentally torn, it is thrown into folds. After the preparation has been kept during some weeks in glycerine, the membrane, which at first appeared homogeneous, becomes granular. The basement membrane is represented as lining the loculi in Fig. 3, *a* and *c*, which contrasts strongly with some of the other loculi from which the membrane has been removed in making the section, and which appear as empty holes. This condition is seen at *d* in Fig. 3.

The cells sometimes fall out of the loculi all in a mass, and they then appear as if they were held together by an invisible investing substance. There is no special connecting substance, however, for they are readily separated by the needles. (Fig. 3, *c*.)

Medullary Substance of the Supra-renal Capsules.

The dark, slate-coloured, medullary substance, when examined with the microscope, is seen to possess a very different structural arrangement from that of the cortical portion of the organ. When viewed with transmitted light, it looks much paler in colour than the latter, and is quite free from any columnar cell-masses. The numerous openings of its sinuses give to it a very characteristic appearance. With a low magnifying power, no very definite idea of the arrangement of its component parts can be obtained. It looks merely like a uniform mass of cells, bounded on either side by the cortical columns. With a high power of about 400 diameters, it is seen to be composed of a reticulated fibrous structure, in the meshes of which lie a number of large, pale-coloured cells with round nuclei. The cells measure, on an average, $\frac{1}{40}$ mm. ($\frac{1}{1000}$ inch), the nuclei $\frac{1}{100}$ mm. ($\frac{1}{2500}$ inch), in diameter. Although at first sight these large cells appear to be irregularly distributed throughout the network of fibres, on the close inspection of a favourable specimen they are seen to follow a somewhat symmetrical arrangement, being singly or in small groups, surrounded by fibres. No basement membrane is here visible, nor can the cells be easily detached from the fibres. (Fig. 2, *b*.)

The cells of the medullary substance have been described by Köllikér and Brown-Séquard as resembling ganglion corpuscles; and certainly, when seen lying in clusters amongst the fibres, they have some similarity to them. For example, they have about the same diameter, they have a well-marked nucleus, and they appear in some cases caudate. When seen singly, however, they look much more like secreting cells. I have never seen a detached one have a caudate appearance, and I am inclined to believe it is the peculiar arrangement of the reticulated fibres which gives the cells that appearance. In the sheep, these ganglion-corpuscle-shaped cells are remarkably plain. Some have two nuclei, and also nucleoli. Both the nuclei and the cells are filled with granular contents. This is best seen in the coloured specimens. Ecker, in describing the medullary substance, speaks of the nuclei as being surrounded by granular matter, but omits all mention of a distinct cell-wall.[*] While examining fresh human supra-renal capsules, I frequently scratched out some of the nuclei from the reticulated fibres, and they had in most cases exactly the appearance spoken of by Ecker. The nucleus lay in the midst of granular flocculi, without any vestige of an enclosing envelope. When the meshes of the fibres were slowly torn across, however, the margin of the granular flocculi in some cases was so distinct, that one could scarcely doubt the existence of a cell-wall. This point requires further investigation. The general appearance of the medullary fibres is given in fig. 2, *b*.

Virchow mentions having seen true ganglion corpuscles in the human capsules; but adds that he does not look upon them as composing the medullary substance of the organ, but merely attached to the nerves.[*] In describing the supra-renal capsules of the land salamander, Leydig states that one part of them is almost entirely composed of dirty-yellow ganglion corpuscles; and that these, through a gradual change in their contents, go directly over into the fatty granular cells proper to the supra-renal body.

Vessels.—The supra-renal capsules are very freely supplied by bloodvessels. Nagel,[†] who described the arrangement of them very minutely says that the greatest part of the capsules consist of capillaries, and that there are two sets of bloodvessels very differently distributed. One set pierce the fibrous sheath of the organ and penetrate directly into its substance, where part of them immediately divide themselves into a capillary network, which surrounds the columnar cell-masses. Another portion pass through the cortical substance, and divide into branches in the medullary part. Some of these *latter* branches here form a capillary network, while others return to the cortical substance, and there, amongst the cell-masses, break up into capillaries.

Another portion of the arterial trunks, before entering into the substance of the supra-renal body, to follow the ultimate distribution just spoken of, course along for some distance in the fibrous capsule. I have been able to confirm this description, although not entirely. I never saw, for example, any of the branches returning from the medullary portion of the organ break up into capillaries in the cortical substance, which they had already traversed in the form of twigs. My idea of the distribution of the vessels may be given in a very few words. When the arteries arrive in the fibrous capsule of the supra-renal body, they divide into a number of branches, which spread themselves in the fibrous sheath over the organ. These branches penetrate at various points into the cortical substance, in which they subdivide into smaller branches. The greater part of the latter form a capillary network amongst the columnar cell-masses. While a few pass onwards into the medullary substance to supply its tissue with blood. The veins resulting from the reunion of the capillaries commence in the cortical part of the organ, and pass on towards the sinuses, into which they empty themselves. The arrangement of the bloodvessels is represented in Fig. 6.

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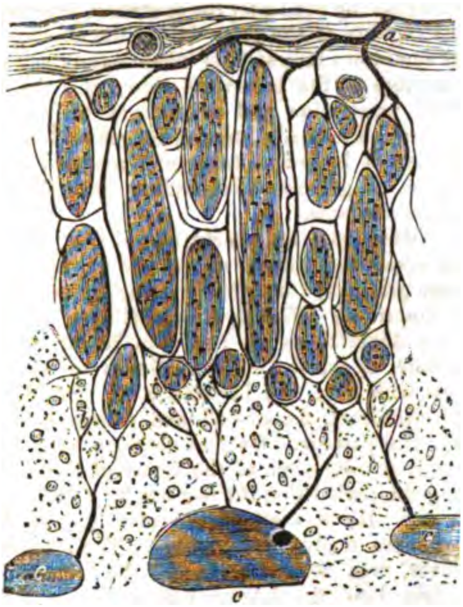
[*] Ecker on the Supra-Renal Capsules. Translation in the *Medical Gazette*, 1848.

[*] Archiv. f. Pathol. Anat., band xii., heft 4, w. 5. p. 488.

[†] Müller's Archiv. f. Physiol., 1836, p. 366.

FIG. 6.



Transverse section of a human supra-renal capsule, showing the distribution of the bloodvessels. *a*, artery; *b*, veins; *c*, sinuses.

Nerves.—The supra-renal capsules are supplied by almost more nerves than any other organ of the body. Nearly every section placed under the microscope contains some twigs. They run in such irregular order that I have not yet been able to satisfy myself with their true distribution. According to Ecker, however, the bundles of nerves surrounded by cellular tissue, which penetrate the cortical, give off no fibres until they have reached the medullary substance. They then break up into twigs, and form a network of nervous tissue.

Upon histological grounds, Kölliker says that he would regard the function of the cortical and medullary substances as distinct from each other. The former portion of the organ, he thinks, is probably in some way connected with the blood glands; while the latter substance, in consequence of its richness in nerves, and its containing cells resembling ganglion corpuscles, he regards as probably an apparatus connected with the nervous system. Leydig and Bergmann go even further, and say that the supra-renal bodies stand in so close a relationship with the nervous system, that they are entitled to be considered as a part of it. I cannot agree with either of these conclusions; because, although in man and some of the higher mammalia the cortical and medullary substances appear to be made up of perfectly different elements, this is not the case in all. In the horse and in birds, as Frey has pointed out, the whole supra-renal capsule seems to have a tolerably uniform structure, and even in man I have occasionally seen the medullary substance filled to such an extent with the cell-masses proper to the cortical portion, that scarcely any difference could be detected between the two parts. Moreover, from my observations, chiefly those upon sheep, I am not prepared to admit that the large cells of the medullary substance are ganglion corpuscles; and further, the columnar cell-masses are so closely allied to some of the gland vesicles found in the digestive canal, especially to those of the Peyerian patches, as Frey pointed out, that I incline to the opinion that the function of the former is like that of the latter, secretory. As the aim of this communication is not to attempt an explanation of the function, but merely to describe the structure of the supra-renal capsules, I shall not at present enter more fully into the question.* I shall merely add that in the supra-renal capsules of the frog I have been able to trace the development of blood corpuscles. I have seen, as represented in Fig. 1, first, a collection of granules without any cell-wall, or the slightest appearance of a nucleus, (Fig. 1, A); secondly, a mass of granules surrounded by a delicate envelope; thirdly, a gradual aggregation of the granules in the centre of the cell; fourthly, the increased aggregation of the granules, giving rise to the appearance of a nucleus, (Fig. 1, A, 2); fifthly, a perfectly-formed granular nucleus, and a great decrease of the granular matter throughout the rest of the cell; sixthly, a homogeneous nucleus, and a total absence of granular matter, the cell having at the same time a general yellow hue; seventhly and lastly, a perfectly-formed blood corpuscle. (Fig. 1, A, 3.) Besides, there are a number of much larger cells in the supra-renal capsule of the frog; they are pale, slightly granular, have a very delicate cell-wall, a well-marked nucleus, and occasionally one or two nucleoli. (Fig. 1, B, 1.) Sometimes a cluster of nuclei is observed, which presents no appearance of being enclosed in cells. (Fig. 1, B, 2.) This observation tends to support the opinion that the supra-renal capsules serve for the higher organization of the blood.

Somerset street, Portman square, 1858.

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* Vide paper entitled "An Experimental Inquiry into the Function of the Supra-Renal Capsules, and their supposed connexion with Bronzed Skin," in the British and Foreign Quarterly Review for January and April, 1858.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

June—July.

Sir Charles Locock, Bart., President.

Extensive Disease of the Osseous System Necessitating the Performance of the Cæsarian Section. By Dr. Greenhalgh.

The subject of the paper was a patient in her thirty-first year, who, during her eighth pregnancy, was attacked with symptoms simulating rheumatism, for which she had been treated. During the sixth month of utero-gestation, when she was first seen by the author, she was greatly emaciated and very decrepid, moving about her room with extreme difficulty, and by the aid of surrounding objects. From being five feet one or two inches in height, she was reduced, in the space of a few months, to four feet two inches and three-quarters. Her urine was found to be loaded with neutral triple phosphates, which a variety of remedies failed to arrest. The nature of the case being suspected, a vaginal examination was instituted, which revealed a large amount of pelvic distortion, so great as to render delivery impracticable by any other means than the Cæsarian operation. At the full period of pregnancy, labour spontaneously set in; and notwithstanding every attempt was made to reach the os uteri by three of the eminent accoucheurs who favoured the author with their counsel and assistance, their endeavours proved futile; consequently the operation was performed by the author in the ordinary manner, and a living child extracted. Although the patient was alarmingly reduced in health and strength, and a considerable amount of blood was suddenly lost, owing chiefly to the placenta being situated immediately under the line of incision through the uterus, still she continued to progress more or less satisfactorily for fourteen days, when the rupture of the transverse colon took place, attended with alarming prostration, from which, however, she rallied. Through this opening fæces continued to escape into the abdominal cavity up to the time of her death, which occurred nineteen days after the operation. The author then detailed the results of the post-mortem examination, which showed extensive atrophy of the whole osseous system, besides far advanced fatty degeneration of the numerous tissues submitted to microscopic and chemical investigation. Especial attention was directed to the dried pelvis, the dimensions of which were detailed, and which with the uterus were placed before the Society. The author then referred to the circumstances under which the disease developed itself, the rapidity of the progress, and the insufficiency of remedies to arrest the malady; the form of bones affected and their peculiar distortion; the state of the urine, as shown by Dr. Beale's analysis; the period of utero-gestation and labour at which the operation was undertaken; the condition of the patient previous, during, and subsequently to its performance; the mode and seat of the incisions; the hemorrhage and its sources; the position and firm attachment of the placenta in relation to the wound; the presentation of the child; the extraction of the placenta; the propriety of partial or complete closure of the abdominal wound. He then drew attention to the patient's state during the nearly three weeks she lived after the operation, especially to the rapidity of the pulse during the absence of other symptoms indicative of inflammatory action; the rupture of the transverse colon, and the attendent prostration and subsequent rally; and lastly, under the head of treatment, referred to the exhibition of large and frequently-repeated doses of opium, to generous diet, and to the effects of ice and stimulants.

Dr. **Merriman** had lately attended a patient under somewhat similar circumstances, who had become gradually (though not so rapidly as in the case described) affected with mollities ossium. Feeling doubtful as to how the labour would terminate, he asked Dr. Tyler Smith to see the patient with him. By his advice, he (Dr. Merriman) introduced the air-ball, and endeavoured to widen the passage. On that occasion, there was certainly a distension of the bones of the pelvis during the period that the bag was fully distended with air. He was afterwards able to pass his finger more readily than before. The aperture, however, was very small, and he could not ascertain how the labour was going on. He brought on the labour artificially by injecting hot water. They tried to alter the position of the child, so as to bring down the feet first. With great difficulty the child was turned, and delivery effected by Dr. Tyler Smith; but in consequence of the length of the labour, its life was not saved.

The **President** inquired whether the patient had suffered in her general health?

Dr. **Merriman** said she had been in bad health for several years, and the bones of the pelvis had been gradually drawing closer together. The urine had been examined by Dr. Smith, and found to contain large quantities of the phosphates.

Dr. **Tyler Smith** said that the important point in this case was, whether delivery could have been effected by any safer means than the Cæsarian section. There was undoubtedly great deformity existing; but it was difficult to say, from the preparation that had been handed round, whether any other means of delivery could have been successfully resorted to. It appeared to him that compression had taken place in the bones since the death of the patient; that a process of shrinking and diminution had taken place, as indicated by the crackings to be observed in various places. But even now the bones were movable, and when they contained the gelatinous matter, which they must have had in life, he imagined they were still more mobile. He thought the deformity was not at all greater than that in the case referred to by Dr. Merriman, and in that instance they managed to get away the head of the child, which was compressed to a very great extent at the coronal suture. The life of the woman was saved, and she was not exposed to any great danger. They could not reach the os uteri, but were able, as the bones were soft, to introduce the hand, get down the leg, and extract the child. He had seen some other cases, though not so severe, and had found that in all of them it was possible to dilate the pelvic bones to some extent by pressure. Compared with the bones of the healthy pelvis, they were elastic and yielding. He should like to ask the President whether he had found that in mollities ossium he could produce any extension of the pelvis during the time of labour. His own impression was that the pelvis might be dilated to some extent in such cases; that they might produce, previous to labour, dilatation of the pelvis by air or fluid pressure. He should like the President's opinion as to whether there had been some amount of shrinking since death, so that the preparation scarcely gave a fair representation of what had existed in life.

The **President** remarked that the symphysis pubis was made to lap over, which most probably was not the case when the ligament was present during life, and that would make a difference of at least half an inch in the open diameter above. Possibly, as the preparation had been handed round, the bones might have been bent more closely together. He had no hesitation in saying that he had delivered cases, not by turning, but by craniotomy, where there was as much difficulty as there appeared to be in the present case, supposing the bones to be extended to the fullest apparent extent without dislocation. The awkward gait of the patient in the early months of pregnancy, to which reference had been made, must have been caused by the fracture of the neck of the thigh-bone, which was discovered after death.

Dr. **Webster** inquired why premature delivery had not been brought on?

Dr. **Mackenzie** said that question appeared to have been fully discussed at the time, and the Cæsarian section having been determined upon, it was thought better to postpone delivery to the full period of gestation.

Dr. **Barclay** remarked that the author stated distinctly, that when he made his examination he could only pass the forefinger as far as the first joint on one side, and that he could barely insert the tip of the forefinger on the other. If that were a true account of the state during life, it exactly corresponded to the condition of the bones as exhibited.

Mr. **Taylor** confirmed the statement of the author as to the smallness of the passage during the life of the patient; and, in reply to Dr. Smith, said he only introduced two fingers into the vagina.

Dr. **Smith** remarked that it was impossible to have ascertained accurately the state of the pelvis with the finger only in the vagina. His observations referred merely to the fact of the Cæsarian operation having been performed at the full time with a pelvis of that character. All accoucheurs would consider the propriety of inducing premature labour in such a case. The earlier the operation was performed, of course the more chance there would be of the delivery of the child. He spoke of the operation as having been undertaken at the full time, and could say that he should have no hesitation in undertaking delivery in such a case.

On a Case of Laceration of the Intestine (Ilium), Unaccompanied with Evidence of External Local Injury, or of Internal Disease. By William Sweeting, Esq., M.R.C.S. (Communicated by Sir Charles Locock, Bart.)

A healthy young man was thrown from the front of an empty waggon, on which he was riding, and fell on a heap of small stones by the road side. Getting up he felt a little shaken, with some pain in the left hip and right shoulder, which parts were found to be bruised and discoloured on the following day. He walk some distance after the fall, and performed part of his duty in attendance upon his horses. He complained of general uneasiness through the next twenty-four hours, with costiveness, and a constant desire to have a motion without the power to relieve himself; but he had no symptoms of collapse, nor even nausea. He retained food and several doses of medicine, &c. He expired suddenly, after the administration of an enema, on the second day after the accident. On post-mortem examination, a circular wound in the ilium, about an inch in diameter, was found. There was no bloody effusion in the peritoneal cavity. There had been no symptoms indicating peritonitis during life, but there was lymph effused on its surface, and the eversion of the edges of the wound proved the infliction of the wound during life. The intestines were quite empty.

Mr. **Fergusson** observed that one of the most remarkable features of the case was the absence of pain.

Dr. **Markham** remarked that the intestines had been injured in other places besides at that point at which perforation had taken place. Inflammation appeared to exist over the entire of the intestines; the place at which the rupture took place was, doubtless, originally in the same condition. The rupture had, he believed, occurred during the time the patient was at stool.

Dr. **Jenner** had seen cases of perforation of the intestine without pain, while in other cases the pain was so severe that the patient cried out from it.

Mr. **Spencer Wells** did not think the fact that there was no external mark or injury very rare, though the author appeared to attach much importance to that circumstance. He (Mr. Wells) had seen several cases of severe internal injury, in which there were no external signs whatever. In two of these cases the bladder was ruptured from falls.

Contributions to the Etiology of Continued Fever; or, an Investigation of various Causes which Influence the Prevalence and Mortality of its Different Forms.

By Charles Murchison, M.D., L.R.C.P., Assistant-Physician to the King's College Hospital, and London Fever Hospital.

The subject of this paper was an investigation into the various causes which influence the prevalence and mortality of the different forms of continued fever. The materials consisted principally of an analysis of 6628 cases of continued fever which had been admitted into the London Fever Hospital in the ten years during which the distinctions had been recorded between the typhus, typhoid, relapsing fever, and febricula. The results thus arrived at were compared with the statistical data which the author had obtained from many of the principal hospitals in England, Scotland, and Ireland, and from various public records. The subject was discussed under the following heads:—

A. *Prevalence of Continued Fever.*

I. The various epidemics of continued fever which have prevailed in Great Britain and Ireland during the present century.

II. Which are the forms of continued fever of which these great epidemics have been composed?

III. The influence of months and seasons of the year on the prevalence of the different forms of continued fever.

IV. The influence of sex.

V. The influence of age, as shown by a calculation of the mean age of each of the different forms of fever, and by ascertaining the number of cases in each quinquennial period of life.

VI. The influence of occupation and station in life on the prevalence of the different forms of fever.

VII. The localities of London in which each form of fever is most prevalent, as shown by the localities from which the 6628 cases admitted into the London Fever Hospital had been derived.

VIII. Over-crowding, with deficient ventilation, and destitution, as causes of fever.

IX. Putrid emanations from decomposing organic matter in drains, cesspools, churchyards, &c., and organic impurities in drinking-water.

X. The contagiousness of the different forms of fever.

XI. The influence of recency of residence in large towns as a predisposing cause of fever.

B. *Mortality from Continued Fever.*

I. The rate of mortality from fever in London Fever Hospital, as compared with that of eleven other Hospitals.

II. The rate of mortality in the different forms of fever.

III. The influence of months and seasons of the year on the mortality of the different forms of fever.

IV. The influence of sex.

V. The influence of age.

VI. The influence of station in life.

VII. The influence of recency of residence in large towns.

The paper terminated with the following conclusions:—

1. Typhus and relapsing fever occur at irregular intervals, and often simultaneously, as widespread epidemics. They then gradually disappear, and both of them, but especially the latter, may be absent for years from those places where, during the epidemics, they are usually the most prevalent.

2. Typhoid fever does not occur in such widespread epidemics. In certain places it is never absent, and its prevalence varies but little from year to year. When outbreaks of it occur in other situations, these are always of the most local and circumscribed character.

3. Typhus and relapsing fever are quite independent of the season of the year; whereas typhoid fever is almost invariably most prevalent during the autumn, and it has been observed to be especially prevalent in seasons remarkable for their high temperature.

4. Sex has no influence over the prevalence of continued fever, nor over that of any of its forms.

5. Typhoid fever is pre-eminently a disease of childhood and adolescence, at which periods of life we know that there is a marked proneness to enteric affections. Less than one-seventh of the cases of typhoid fever are above thirty years of age. Typhus and relapsing fever exhibit no such predilection for youth. Of typhus, one-half, and of relapsing fever, one-third, of the cases are above thirty.

6. Typhus and relapsing fever are the appanage of poverty and destitution, and seldom or never occur amongst the wealthy, except from direct contagion. Typhoid fever attacks both poor and rich without distinction.

7. In large cities, typhus and relapsing fever are for the most part limited to those localities remarkable for the over-crowding of their inhabitants; and in country districts they are seldom or never met with, except when directly imported. Typhoid, on the other hand, occurs alike in the centre and suburbs of cities, in the crowded hovels of the poor, and in the spacious mansions of the rich, and also in isolated houses and hamlets in the country, without any traceable sources of contagion.

8. When fever breaks out in a house or locality, it seldom or never happens that some of the cases are typhus and others typhoid; but typhus and relapsing fever occur not unfrequently together.

9. Cases of what has been called "febricula" may co-exist along with any of the three other forms, but especially with typhus and relapsing fever. Most of them are either mild varieties of some of these, or dependent upon some derangement of digestion, or other non-specific causes.

10. Over-crowding and destitution appear to be

the essential causes of typhus and relapsing fever, and to be capable of generating them *de novo;* while there is no evidence that they have any such influence over the production of typhoid fever.

11. There are many circumstances which tend to the belief that the emanations from decaying organic matter, or organic impurities in drinking-water, or both of these causes combined, are capable of generating typhoid fever; but there is no authenticated evidence whatever to prove that such causes can give rise to typhus or relapsing fever.

12. There are some grounds for believing that a combination of the causes mentioned in the two last paragraphs may occasionally, although very rarely, generate a disease intermediate in its character between typhus and typhoid, or may (to speak perhaps more correctly) cause typhoid fever to assume some of the characters of typhus; but such cases cannot be used as an argument in favour of the identity of the poisons of the two diseases; for, first, instances are not wanting of two of the exanthemata co-existing in the same individual; and, secondly, if a known poison generates one train of symptoms, and a second poison another, a combination of the two poisons will generate a combination of the two trains of symptoms, without its being warrantable to conclude that the poisons in the two first instances were identical.

13. Typhus is eminently contagious. Typhoid fever is also contagious, but in a more limited degree, and possibly through a different medium. Again, typhus has in no instance been proved to communicate typhoid, nor typhoid to communicate typhus. An attack of either confers an immunity from future attacks of itself, but not of the other.

14. Recency of residence increases the liability to typhoid; scarcely, if at all, that to typhus.

15. The great majority of the cases of relapsing fever have been Irish, and of these a large proportion had but recently arrived in London. There seems reason for believing that fever imported from Ireland as "relapsing" may gradually pass into typhus.

16. Relapsing fever offers a marked contrast to typhus and typhoid in the small mortality which it occasions.

17. In comparing the mortality from continued fever at different times and places, it is essential to take into consideration the form of fever which has prevailed. If this be not done, the comparison is valueless.

18. The small mortality from continued fever constantly observed in Ireland, along with other circumstances, renders it probable that in that country a fever more or less allied to the relapsing, or to febricula, is more common than in Britain.

19. Season of the year has no influence over mortality of any of the forms of fever.

20. In all of the fevers there is not much difference in the mortality of the two sexes.

21. Typhus is least fatal between the ages of ten and twenty, the mortality at that period of life being under five per cent. About twenty, the mortality increases with the age, until of those above fifty considerably more than one-half die. The mortality from relapsing fever appears to be influenced by age in a similar manner. In typhoid fever, on the other hand, in no period of life is the mortality under 12½ per cent.; and, although, as in typhus, the rate of mortality increases with the age, it does so in a less degree.

22. The mortality from typhus is greater amongst the very poor than amongst those in better circumstances. Typhoid fever is equally mortal in all classes.

23. Recency of residence increases the mortality from, as well as the liability to, typhoid fever, but has no such influence over typhus.

24. Typhus and relapsing fever are strongly assimilated in the causes which give rise to them, if the specific poison of the two be not actually the same. Typhoid fever, on the contrary, appears to be a perfectly distinct affection, dependent upon totally different causes.

25. The facts which have been adduced in reference to the mode of origin of the different forms of fever deserve the serious attention of those entrusted with the care of the public health; for it is manifest, that should they be confirmed by subsequent observation, they must have an important bearing on the subject of hygiene.

Dr. Wardell had taken, some years since, elaborate statistics of 1200 cases of fever in Edinburgh. The conclusions at which he had arrived were in many respects similar to those stated in the paper before them. The disease occurred almost invariably amongst the poor in the densely crowded districts of the old town on the highest flats. His conclusions respecting the generation of fever did not quite coincide with those of the author, who seemed to think that the disease was generated chiefly by noxious vapours. In the Canongate and Cowgate, however, the persons who lived in the lower flats, and consequently nearest the sinks and cesspools, were better off than those above, who were more destitute.

Dr. Stallard's own experience at Leicester bore out some of the author's conclusions. He agreed with him that typhoid fever prevailed more in autumn than other seasons. In an hospital with which he had been connected the cases of typhoid fever averaged twenty to thirty in the autumn, and rarely five or six in the spring. A large number of cases occurred amongst the better classes in the epidemic of 1846. His opinion respecting the cause of fever was similar to that of the author. In the year immediately preceding the epidemic of 1846 there was great destitution in Leicester, 10,000 persons being sometimes on the pauper list, yet there was no considerable amount of typhoid prevailing. In 1846 there was less destitution. A large portion of the town was only surface drained, and many of the poor lived in houses back to back, in the form of squares, with cesspoools in the centre. Typhoid fever at one time prevailed for a considerable time in a street in the high part of the town, and it was eventually accounted for by the discovery of a choked-up sewer insufficient for drainage purposes. In a manufacturing village in Leicestershire, containing from 2000 to 3000 inhabitants, a gentleman last year spread the contents of a cesspool over a field in the centre of the village. It resulted in the fact of 150 persons being ill at the same time, and the occurrence of a very large number of deaths. He had observed that with the increase of the velocity of the wind the number of cases of fever decreased—a fact which had an important bearing on the subject of ventilation.

Dr. **Jenner** lamented the circumstance of so many persons dying yearly from what were preventible diseases. Typhoid fever, he had no doubt, arose from imperfect sanitary conditions. When it occurred amongst the rich, it was in those who were exposed to fæcal and other noxious emanations, or who drank water into which fæcal matter had passed. With the exception of medical practioners, he had only seen two or three cases of typhus fever amongst the better classes.

Dr. **Gairdner** coincided in opinion with the author respecting the essential difference between typhus and typhoid fever. The former prevailed in Edinburgh; but two years since, as much as six weeks or two months would elapse without a single case being received into the Infimary. Typhoid fever, however, still maintained its level, even if it had not increased, whilst typhus was thus disappearing. He differed from the author as to the identity of typhus or relapsing fever. Experience in Edinburgh in 1843 tended to prove that the poisons were essentially different, and were generated under different circumstances. During the last ten years the type of typhus fever seemed to have changed. In the first place, it was a much milder disease; and whilst the mortality attending it ten years ago was scarcely less than 1 in 4, during the last three or four months, he (Dr. Gairdner) had had fourteen cases of true eruptive typhus, not one of which had proved fatal; and the average mortality probably did not exceed 1 in 30. The duration of fever was also diminished. Ten years since, it never stopped before the fourteenth day, but it was now common to see it terminate by the tenth day, and sometimes as early as the eighth or ninth. All the symptoms were earlier in their development, particularly the eruption, which did not appear formerly before the beginning of the second week, but now it showed itself by the sixth or even the fifth day; indeed, he had seen it as early as the third or fourth. He had observed that in eruptive cases there was no relapse, even though there might be an early crisis.

Dr. **Wardell** could not agree in all the conclusions of Dr. Gairdner. He had seen patients with true spotted typhus subsequently attacked with relapsing fever, but he regarded the diseases as distinct as measles and small-pox.

Dr. **Jenner**, from observations made ten years ago, had long thought that the eruption of typhus fever might be expected on the fifth day. He had not himself, during the last ten years, observed any change in the type of the disease.

Dr. **Gairdner** had, in his remarks, referred to the disease as prevalent in Edinburgh.

Dr. **Stewart** had, many years since, seen cases of typhus in Edinburgh answering the description of the present form of the disease as given by Dr Gairdner.

On the Treatment of Contracted Joints.

By **Holmes Coote**, Esq., F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital, and to the Royal Orthopœdic Hospital.

The author limited his remarks to contractions of the knee, as best illustrating this class of affections, and commenced by assuming certain propositions as granted—namely, that the diseases of joints may be generally classed under two heads—struma in the young, rheumatism or gout in the adult; that the morbid changes run through a definite course to cure; that the severer morbid changes, leading to the necessity of operation, are chiefly accidental—*i. e.*, caused by inattention on the part of the patient or by improper treatment; that the flexed position of a limb is easiest to a patient during the acute stage of disease, owing to the relaxation of the ligaments; that the adhesions which form under these circumstances may be elongated or ruptured, but that the continuity of surrounding tendons should be preserved. The "pulpy thickening" of the synovial membrane, when it becomes converted into a light brown coloured mass, was regarded by the author as one stage in a progressive series of morbid changes, ending in the removal of articular cartilage. He regarded it as curable—*i. e.*, as not necessarily leading to removal of the limb.

Rheumatic disease was also regarded as curable—that is to say, it pursues its course, and tends to changes which may be directed and greatly benefited by the aid of surgery. Bony anchylosis, rare in the former affection, is here by no means uncommon.

There are three methods by which a contracted limb may be straightened:—

1. Forcible extension, as practised by Dieffenbach and Louvrier.
2. Forcible extension following the subcutaneous division of tendons; the limb being flexed again until the divided parts have re-united, and the soft uniting medium is then slowly elongated.
3. The gradual extension of the uniting fibrous structure, either with or without the subcutaneous division of tendons.

The author illustrated his paper by cases, and concluded by strongly recommending the last-named proceeding.

Mr. **Fergusson** would waive discussion on the constitutional treatment of diseases of the joints, which, it was presumed, was not neglected, though not mentioned by the author, and of rheumatic disease of the joints, which very rarely called for the knife of the surgeon. There was one novelty in the views of the author, with which he (Mr. Fergusson) agreed, that a very large number of cases of diseased joints were curable, or, rather, would get well spontaneously. The question to be decided was this, and it was often one of difficulty: A patient appearing to be sinking to the grave with hectic fever, wasting discharge, and other symptoms, was the surgeon justified in then interfering, either by removal of the limb or by resection of the joint? In many cases the fearful crisis seemed to be arrested by such operations, the hectic ceasing, the discharge becoming lessened, and the health improved. It might be said, that in some of these cases the surgeon had interfered too soon, and that if he had had the courage to wait, the crisis would have passed away, and a favourable change have ensued. He believed in many of these instances it was the duty of the surgeon to interfere, the operative procedure being, under all the circumstances, the most conducive to the welfare of the patient. But upon this point the experience of no single individual would be sufficient to determine the general question. He did not agree with the author of the paper that bony anchylosis was of rare occurrence, for hundreds and thousands of cases might be seen in the museums and private collections. He agreed in the assertion, that cases of bony anchylosis could not be interfered with in the way described; but the author had not referred to the state of modern surgery on that subject. Anchylosis, up to a recent date, was regarded as the best result that could follow a joint disease of the most formidable kind. In many cases this was, no doubt, true; but modern surgery had shown it was not so in all. After disease or resection of the elbow-joint, anchylosis was not regarded as the best result, and even in cases of stiff joint following a cure by Nature, it was doubtful whether the surgeon was not called upon to cut down upon the articulation, and make a new joint.

Mr. **Curling** admitted the occurrence of cases of diseased knee-joint in which it was impossible to save the life of the patient without amputation of the limb or resection of the joint, the latter operation often being of great advantage by preserving useful limbs. Cases admitted to the hospital were often those which had been much neglected, and the patients so reduced that nothing but an operation could be of service. Such cases, he believed, did not present themselves at orthopædic hospitals, which were rather for the cure of deformity than of disease. He could discover no novelty in the views advanced by Mr. Coote, who, he thought, had taken a too unfavourable view of modern surgery. Surgeons of the present day did not condemn limbs so frequently as the author seemed to imply, but, on the contrary, were in the constant habit of employing the remedial measures recommended in the paper.

Mr. **Charles Hawkins** had seen very many cases treated in the manner described by Mr. Coote. Resection, he thought, was not required so frequently as it was now resorted to; at all events, amputation was less frequently performed formerly than resection was of late. Chloroform, with the many blessings it had introduced, had brought with it some evils, and one of these was, that operations were more readily suggested and submitted to than formerly. In reference to the plan of treating diseased joints by rest, care, &c., he mentioned an instance in which a lady, five years since, had been recommended to have her leg amputated by some of the most distinguished surgeons in Edinburgh and London; but her physicians decided that she could not bear it. The operation was not performed, and she had now as good a joint as any he had ever seen after resection.

Mr. **Brodhurst** had never seen partial anchylosis overcome by gradual extension; indeed he did not believe in the possibility of such an occurrence. He had, however, seen instances of thickening of the synovial membrane attended by some contraction of the muscle, and where tendons had to be divided, the limb by this means being restored. He had never, however, seen cases of partial anchylosis overcome and motion restored without the adhesions being ruptured. His own experience warranted him in speaking with some certainty on this subject. He had had many cases of partial anchylosis under his care, in which the adhesions had been ruptured, and motion restored. Of thirty-four cases, in nineteen partial and useful motion had been restored. He mentioned an instance of a young man who had suffered from rheumatic inflammation, and on whom he had operated in the way described; within a month he was able to mount his horse, and ride many miles free from pain.

Mr. **Hilton** considered that the result proved that the disease was not a very serious one; for he had yet to learn that a joint previously fixed by soft adhesion between the opposite surfaces, so that the patient was unable to move without pain, could recover in so short a period. It appeared to him (Mr. Hilton) that the object of the author of the paper was to bring before the notice of the Society a class of cases which he thought might be satisfactorily relieved by a comparatively trifling operation, in opposition to a very general impression prevailing in certain sections of the profession, that excision was the best method of treatment. He (Mr. Hilton) coincided in Mr. Coote's opinion. Excision was not free from danger, and indeed he believed that, when all the statistics were collected, it would be found to be more dangerous than amputation. He differed from the author's statement, that the pulpy degeneration of Sir B. Brodie was a common disease. Pulp-like granulations growing upon granulating bones were, no doubt, of common occurrence, and such joints often recovered by rest. This was a different disease altogether from that described by Sir B. Brodie, which was very rare. He differed with Mr. Fergusson as to the frequency of anchylosed joints, which he contended were comparatively rare.

Mr. Spencer Smith had never met with any person who was bold enough to assert that pulpy degeneration of the synovial membrane was a curable disease. The case mentioned by the author, he believed, was not one of pulpy degeneration, or if so, that the patient was not cured.

MEDICAL SOCIETY OF LONDON.

Dr. Hughes Willshire, President.

Mr. Baker Brown referred to the use of the

SILVER WIRE SUTURE,

lately recommended by Dr. Sims. Mr. Brown said that it had the great advantage of not cutting itself out, and in this respect was invaluable in cases of operation for vesico-vaginal fistula and ruptured perinæum. Dr. Sims had recommended its use in cases of ovariotomy, and had suggested that the pedicle should be secured by a silver wire ligature. It might be used also advantageously in cases of hare lip, flap operation of the thigh, &c. Mr. Brown had never seen the silver wire affected by gases emanating from the wound.

Dr. Barratt was about to perform ovariotomy, and would be glad to know if Mr. Brown endorsed the opinion of Dr. Sims respecting the employment of the silver wire in that operation. Did Mr. Brown still advise injection in simple cases of ovarian dropsy?

Mr. Brown agreed with Dr. Sims respecting the employment of silver wire sutures in ovariotomy. He still employed injections in simple unilocular non-malignant forms of ovarian disease previous to attempting removal.

Dr. Headland suggested that platinum wire would be more advantageous than silver wire, inasmuch as it would not be acted upon by the gases, which would affect the silver after a certain interval.

Mr. Brown had used the platinum wire, but it was too pliable and flexible; it was not necessary to retain the silver wire long enough to be acted upon by gases. He might state, in reference to cases of vesico-vaginal fistula, that he had lately operated upon a case successfully, the cure being effected in ten days.

A paper was afterwards read by Dr. Nelson, of New York, on the Circulation; but it offered no points of sufficient interest for a report.

At the previous meeting of the Society, Mr. **Alfred Poland** read a paper

ON THE ABUSE OF MERCURY IN OPHTHALMIC DISEASES.

The author prefaced his remarks by stating that his chief aim was to draw the attention of the profession generally to the above subject, and more especially when practised by those not over-conversant with these affections. He was sorry to say that the study of eye diseases had considerably declined, and that it was more and more becoming an isolated branch of the profession. In former years every hospital and general surgeon undertook the treatment of this class of cases, and the lecturers on surgery at the several schools duly elucidated the principles and practice thereof. Nowadays, on the contrary, with the exception of one or two leading medical schools, ophthalmic surgery had become isolated, and rendered perfectly distinct and separate; there were separate wards and separate lectures, which were, moreover, unrecognised by the examining boards. The author hoped that this state of affairs might be remedied, and that persons before entering on practice should show some evidence of having studied, and become practically acquainted with the treatment of diseases of the eye. With these strictures the author cursorily surveyed the general diseases of the eye, pointing out that in the majority of them, mercury was not required. In the conjunctival inflammation, including also gonorrhœal ophthalmia, mercury was inadmissible, inasmuch as they could be cured without its administration. So, also, in so-called strumous diseases, comprising ophthalmia and corneitis, it was a remedy that did no good, as attention to the secretions and excretions, with due regard to diet and the powers of the patient, sufficed to eradicate the complaint. It would hardly be credited that, in the year 1858, mercury was administered for penetrating wounds of the eye, yet he (Mr. Poland) was sorry to say such was the case; and, he remarked, what would be the results of operation for extraction were this line of treatment to be adopted? In adverting to sclerotitis and iritis, mercury came to our aid, more so in the latter than in the former disease; yet even in these affections more attention ought to be paid to the condition and constitution of the patient than the nature of the disease. It was too much the fashion to consider that because a part or organ had taken on inflammation, and, in consequence, had appended to its name the dreaded term, "itis," it was to be combated by calomel, leeches, low diet, &c. Many an eye, and, perhaps, life, had been lost by this unfortunate appendage. As for amaurosis, the author naïvely stated that all the mercury in the world would not remove a cupped condition of the entrance of the optic nerve, nor would it replace a detached retina, nor promote the absorption of dirty white pigment on the retina, nor restore the lost transparency of the retina, nor such other organic changes pointed out by the use of the ophthalmoscope. Yet mercury was, and is still, administered by some, for days, weeks, and even months. Space will not allow us to enter more fully into each of the topics brought forwards, as these principles and treatment advocated are those generally practised and taught by the several leading surgeons who have studied eye diseases. It was the author's endeavour, in his few loose remarks, to call attention to the simple fact, that an improvement had taken place in the last few years, by a more guarded abstinence from the use of the drug mercury in ophthalmic practice, and that such should be made known to the profession generally, so that they may avoid resorting to the remedy as a specific in inflammations generally.

Mr. DE MERIC read a paper on

PHAGEDÆNA AND GANGRENE IN SPECIFIC SORES.

The author stated that he was anxious to bring under the notice of the Society cases of great interest illustrating the above complications, and that he would view the latter, not only, as is generally done, with respect to primary sores, but also with reference to secondary and tertiary ulcers. This synthetic view of phagedæna and gangrene in syphilis would be both methodical and useful in practice, as the therapeutic measures were almost the same for all specific sores when attacked by phagedæna and gangrene.

From the facts which had come before him in practice, Mr. DE MÉRIC was disposed to classify the complications just alluded to in the following manner:—

1. Dry gangrene.
2. Moist gangrene, from an excess of inflammation.
3. Diphtheric phagedæna.
4. Sloughing phagedæna.
5. Creeping, or serpiginous phagedæna.
6. Perforating phagedæna.

Of all these complications, the author had extremely instructive cases to read; each case being accompanied by a drawing, which, being extremely faithful, brought, in some degree, the patient before the Society. He would, however, confine himself to some striking cases of dry gangrene and sloughing phagedæna.

Dry gangrene, the author observed, was but seldom connected with specific sores, and was, in fact, not mentioned in books as a complication of syphilitic ulceration; but it would appear that such complication now and then occurred within the range of syphilis. In the feet, dry gangrene is the result of insufficient supply of blood; in the prepuce it would appear to be the result of pressure.

Mr. DE MÉRIC then read the case in point, in which a patient under his care, at the Royal Free Hospital, had lost, by gangrene and sloughing phagedæna, nearly the whole of the penis. The man was twenty-four years of age, and had been very intemperate. On the first application, he presented a row of chancres around the corona, with inflammatory paraphymosis. Mr. de Méric reduced the latter, and advised rest and antiphlogistics. But the reduction did not arrest the excessive inflammation, and in a week's time the glans forced its way through the gangrenous prepuce, and the latter remained pendant and quite black, partly at the back of the glans. The sphacelated prepuce was removed by slitting and circumcision; and the glans, as well as the line of section, freely touched with fuming nitric acid. Tonics, wine, and opium were administered; but the glans was also attacked by dry gangrene, and fell off in a few days, while sloughing phagedæna proceeded at a fearful pace up the corpora cavernosa.

The repeated applications of nitric acid, large doses of tonics, brandy, and opium, were unavailing, and the organ perished up to an inch and a half from the pubes. So weak and prostrate, and so tormented by an incessant cough, was the patient at one time, that his life was in jeopardy. The means used to rouse the organism succeeded, however; he recovered perfectly, and left the hospital forty-three days after he had been received into the ward, the urine escaping freely from the under surface of the stump of the penis.

Mr. DE MÉRIC was of opinion that the dry gangrene of the prepuce and subsequently of the glans occurred, the first by pressure of the distended glans, and the second by the sloughing phagedæna of the corpora cavernosa, which clogged the arterial canals supplying the glans. The phagedæna which destroyed the corpora cavernosa, the corpus spongiosum, and the urethra, might well be ascribed to the wretched condition into which the patient had fallen by intemperance. Yet dry gangrene and sloughing phagedæna might occur in circumstances the very opposite of the foregoing; and this was proved by the second case read, in which the patient was in robust health, only eighteen years of age, and extremely temperate. Here the lower part of the prepuce also turned black after the phymosed penis had been attacked by acute inflammation: severe hæmorrhage took place, and when the sphacelated prepuce had been slit and removed by circumcision, the glans was found almost eaten away by sloughing phagedæna. The treatment of this second case was the same as had been used in the first; but it proved more effectual, as the phagedænic action was at once arrested. The patient made a good recovery, his urethra having completely escaped.

The author thought that the dry gangrene of the prepuce in this second case might have been the result of exaggerated œdema of the upper part of the penis. Such cases went far to prove the advantages of the early slitting of the phymosed prepuce when acute inflammation sets in, and the glans is suspected to be the seat of sloughing phagedæna.

Another case of large black slough, approximating dry gangrene, was then read. The patient, under the care of Dr. Marsden, was a young girl, who, under the influence of excessive inflammation of the vulva, and almost unexampled misery and want, was attacked with superficial gangrene over the pubes and sloughing phagedæna about the labia. The girl, who was in a most pitiful condition when she came into the ward (as well represented in the drawing exhibited), recovered perfectly under the use of opium, tonics, stimulants, scrupulous cleanliness, and generous diet. This case, which was kindly put at Mr. de Méric's disposal by Dr. Marsden, belonged properly to the class of moist gangrene by excessive inflammation; but it proved how rapidly the black gangrenous surface may form under the circumstances above detailed, and how effectual in these distressing cases are the invigorating means which were employed.

The author next alluded to cases of *sloughing phagedæna*, which were also illustrated by excellent drawings. The first referred to a primary ulcer upon the corona of an intemperate man, which destroyed part of the glans and produced a traumatic hypospadias; the second was that of a girl who suffered from tertiary periosteal gummy tumour of the cranium, and ecthymatous sores of the scalp, which all took on a phagedænic action. The destruction and irritation were so great that the patient sunk. The third case, which also ended fatally, was a good example of creeping phagedæna of the back, which invaded a most extensive surface. The usual means of arresting phagadænic action was unavailing in these cases, the main cause of the failure being that the patients had, previous to their coming into the hospital, brought their organism to the lowest ebb by intemperance and irregular habits. The author now passed in review the principal means used to combat phagedæna; and considered that such remedies as were calculated to invigorate the system, excite a new action in the part affected, and protect the patient from the evil effects of putrid emanations, were the principal measures upon which we can rely in complications which have no connexion with syphilis itself, but depend mostly on the state of health of the individual affected.

Mr. Hunt agreed with Mr. de Méric that intemperance, and uncleanly and reckless habits, would cause gangrene and phagedæna in specific sores. He (Mr. Hunt) recollected the time when frightful cases of the kind used to come to St. Thomas's Hospital, from a filthy spot in the neighbourhood called St. Catherine's-close. One girl had her groin so fearfully destroyed that the femoral artery was attacked, and the patient died of hæmorrhage. After St. Catherine's-close was done away with, no such sores were observed. He had also in his memory the case of a boy whose penis perished up to an inch from the pubes; the genital function was, however, subsequently performed, as the patient had occasion to seek relief for gonorrhœa. He thought that certain cases of phagedæna might arise where the surgeon was justified in trying mercury. He remembered the case of a gentleman who lost half the glans by phagedæna; the patient had secondary symptoms, and was cured by mercury. In another case, the nose suffered considerably, and a sore, discharging abundantly, formed on the scalp. Mercury was given, and the discharge stopped, but the patient died of phrenitis. Mercury might be given in rupia, but no permanent benefit was generally obtained.

Mr. Harding believed that phagedæna might exist as an epidemic, and attack all kinds of constitutions. He had known a married woman presenting all the outward appearance of perfect health, affected with the most distressing and rapidly destructive phagedæna of the labia and pubes.

Mr. Peter Marshall asked Mr. de Méric what classes of patients were generally attacked, as statistics on this subject might be interesting.

Dr. Camps declared that the utmost caution should be used respecting the statements made by patients, as they were very apt to disguise the truth. He had himself been most cleverly deceived in the case of a girl who was passing herself as irreproachable, and was found affected with bubo. He did not think that epidemics of phagedæna had been observed.

Mr. de Méric briefly answered, and stated that, with a few exceptions, he agreed with the opinions of the different speakers. He had given mercury with advantage in perforating phagedæna, which, though originating in a soft ulcer, had refused to heal. He had not cast up his cases, so as to offer statistics respecting the class of patients usually attacked with phagedæna; but he could safely say that, amongst his private patients, phagedæna had been extremely infrequent. Mr. de Méric concluded by showing the drawing of a case of creeping phagedæna, treated by Mr. Weeden Cooke at the Royal Free Hospital, which had followed the artificial inoculation of primary pus. When the patient came under Mr. Cooke's care, the chancre had been advancing in one direction and healing in another for two years; it had, in fact, run round from the front of the thigh to the gluteal region. The patient was a remarkably healthy man, and had taken a host of remedies. Mr. Cooke succeeded in obtaining cicatrization by dressing the sore with a strong solution of chloride of zinc.

Mr. Weeden Cooke read a paper on

THE ARREST OF CANCER.

After an exordium deprecatory of medical scepticism, which led to fatalism, and in praise of a just confidence in man's power to heal his fellow-man, "which," said the author, "is only bounded by his intellect, by his inability always to control the object of his treatment, and by time, which wears out the machine he works upon," Mr. Cook referred to the different forms of cancer, scirrhus, epithelioma, medullary sarcoma, cystic sarcoma," &c., as having broad outlines too distinct to the eye and the touch to require often the delicate but sometimes illusive aid of the microscope. He then spoke of the recurrence of cancer after operation as so peculiarly characteristic of this disease that he was disposed to include in the same category all rocurrent so-called benign tumours. After noting the peculiarities of the different forms of cancer, the author continued: "In contemplating the phases of this disease, a glimmer of cheerfulness is shed over the sombre picture by a knowledge of the fact that scirrhus, the least active, is also the most common form; 1858 cases treated at the Cancer Hospital yielding, of scirrhus, 1344; epithelial, 389; medullary, 77; and cystic, 35; so that scirrhus is as nearly three to one of all the other forms, and it is in this large majority that remedies are of most avail. The mamma is its most wonted seat, almost four-fifths of of scirrhus cases occupy that gland." The period of life at which the disease appears corresponds to the cessation of the catamenia, the average age of attack being forty-four. The blood at this period is rendered impure by the absence of that customary process which in so marked a degree clarifies the system when it is in force. How the scirrhus is formed out of deteriorated blood may be imagined, but cannot be known. Even hereditary taint yields little towards the solution, since but one in seven cases has any predisposition. The fact, however, of the climacteric association is still further shown in the registrar's report for the last quarter, by which it appears that after forty years and upwards, the deaths from cancer form four-fifths of the whole number. On the other hand, the influence of local injury is only testified to in one in eight cases. The broad fact therefore stands out, that in the very large majority of scirrhus cases they do develop themselves at that climacteric period when the vigour of life receives a severe shock, the effects of which it is the peculiar province of medical science to soften and subdue. For many years it has been the custom to cut out this local manifestation of a general disease, and very recently to destroy the tumour by a cauterizing process which has the peculiar advantage of prolonging the operation some forty or fifty days. Before the present century, operations for cancer were not so rife, many eminent surgeons having opposed them, when they were performed either by means of the knife or caustic, which latter was at that time enjoying an ephemeral reputation in France. Specifics then became fashionable. Arsenic and hemlock enjoyed the highest reputation; but these proving unsatisfactory, early extirpation was again proposed, and has been most freely practised, encouraged no doubt by the introduction of anæsthesia, by ether and chloroform. That this proceeding is a cutting of the Gordian knot, and not a skilful unravelment, cannot but be acknowledged, when we find that out of 207 cases of operation observed at the Cancer Hospital, the disease had returned (taking the average) in fifteen months. A recurrence of the disease is more uncontrollable than the original tumour. A dyscrasia of the system is produced by the operation, and so greater activity of disease is provoked. By removing the tumour the reservoir is taken away, and the cancer cells are distributed over the whole economy. "Experience," says Mr. Cooke, "leads me to the conclusion that there is, in a great number of these tumours, a natural ebb tide. The tumour grows at first rapidly, after a time slowly; it then remains stationary, and at last begins to waste, until gradually it almost disappears. These favourable cases are seen in persons of cheerful temperament. In other persons the progress will be the same, but the termination a spontaneous sloughing out of the whole tumour. Sometimes the wound remaining will fill up and heal, or it will remain a dry scab for years without inconvenience, or a small superficial ulcer will continue to give some inconvenience, which may be relieved and kept in subjection for years by judicious treatment. Taking the climacteric disturbance as the grand exciting cause of the development of cancer, it is only rational to expect, when that disturbance subsides, provided the patient is well supported, and well managed, the mind relieved of all fear, and the cancer itself neither tattooed with caustics nor excised, that the cause being removed, the effect will have no further serious existence; that, in fact, the active cancerous tumour will become a mere inert fibrous mass, which is, in a great measure, reabsorbed by the neighbouring vessels. Numerous cases were read by the author illustrative of his views, and showing the advantage of constitutional tonic treatment. He then dwelt upon the importance of the inculcation of hope, "the charm of every woe," by both surgeon and friends, "it medicines the body no less than the mind, and should be administered with a full conviction that it is a most valuable therapeutic agent, and not as an amiable delusion." He spoke also of the influence of temperament, and suggested the simple division of "cheerful" and "desponding," instead of the old and more complicated arrangement of Hippocrates. It will invariably be found that whilst a melancholy mind, in which hope cannot be raised, is the surest enemy with which the surgeon has to battle, a cheerful temperament is such an aid to art, that with it a sufferer from cancer will tide over the evil days, and live to the usual period of man's existence. The treatment most relied on was good noruishing diet, with beer or wine; soda to correct the secretions if necessary; bark and hydrochloric acid, or iron as a tonic. Iodine and mercury are positively injurious, and opium should never be resorted to whilst there is any hope of restoring the patient. As a local application, lead, either as a supporting plaster, or as a lotion when there is much activity in the tumour, has a very sedative effect. The carrot poultice cleanses an ulcerated surface admirably, if frequently renewed, whilst the chlorate of potash lotion is the most effective in healing the open wound. These and other simple methods of dealing with the disease, which are all founded on the principle of restoring and preserving, and giving support to the vital principle, wasting no time in looking after impossible specifics, will advantageously displace the use of the knife and caustic in the majority of cases, "although" said Mr. Cooke, "I am anxious to state that there are cases—*ex. gr.* epithelial cancer of the lip and of the extremities, as well as some forms of medullary cancer—in which operation is desirable and beneficial." A letter from Mr. Cooper, consulting surgeon to the Liverpool Infirmary, was quoted, in which he says, "For my own part I confess that I have known few cases—scarce any, where the diagnosis has been unquestionable—in which extirpation has been successful. On the other hand I have seen many cases, not interfered with by the knife, whose lives appeared little, if at all, shortened by the affection." In conclusion, the author affirmed modestly but decidedly, that constitutional treatment was proved, in its results, to be immeasurably superior to operative treatment, so much so, that whereas the disease always returns after operation, and then with an increased impetus, by constitutional measures, which should include moral as well as physical support, and soothing local applications, it is arrested in its destructive progress, the new blood throws off the vicious habit of the old, no more cancer-cells are laid down. The old disease becomes a mere inert foreign body, with sloughs, and is thrown of from the renovated system, or is gradually thrown off with the other *effete* matters of the body. The plague is stayed, and the remainder of life may continue so uninfluenced by the terrible conflict which has been won, that length of days may be attained, and life ultimately ebb out in the calm twilight of evening.

Mr. **Barwell** suggested questions respecting the proportion of cases relieved, whether it was possible to trace them to the end, and whether they eventually died of cancer or of other diseases.

Mr. **Harrison** did not see how cessation of the menses could be set down as the cause of cancer, seeing that men had cancer as well as women, although in a less degree. He approved of the constitutional treatment, and especially the moral management suggested.

Mr. **de Meric** thought that credit was due to the author for resisting the always tempting and easy solution of the difficulty by operating. He related the unfavourable results of operation in his own hands, the disease returning very quickly after extirpation, and argued that, as patients live longer without operation, it was desirable to adopt the constitutional method of treatment.

Mr. **Hunt** would have been glad to have heard more respecting the diagnosis of the disease. He had no doubt that this was perfectly easy and familiar to the author, but there were sometimes cases which were very difficult to decide upon. He related a case of ulcer at the angle of the mouth, which had been removed by operation, and returned; it was afterwards seen by Dr. Fell, under whose treatment the ulceration increased. A microscopical examination of the secretion showed the presence of a large quantity of fat cells, which in his opinion indicated lupus. Mr. Hunt also related a case of cancer of the lip, which returned, and killed the patient very soon after an operation, and another case which got well by constitutional treatment. He was, therefore, of opinion that operations were undesirable.

Mr. **Canton** believed in the spontaneous degeneration of cancer, and illustrated it by a case of scirrhus of several years' standing in the breast, with enlargement of the axillary glands. He removed the whole of the disease, and found the cancer cells shrunk and faded, which led him to believe that these tumours after a time become benign. He was disposed to think that the greater prevalence of cancer in unmarried than in married females, and its frequency in males suggested some connexion with celibacy. He related cases showing the rapid return of cancer after operation, and the injurious influence of the mental depression which attended operations. Great mental distress was often apparently the cause of the development of cancer. He had not seen any benfit from treatment in cancer of the uterus. There was a great difficulty in tracing cases to their termination. It would be very desirable to establish a general register, so that cases passing from one hospital to another might, by an interchange of reports, be made complete, by bringing the history and treatment into one focus.

Dr. **Rogers** doubted the connexion of cancer and the cessation of catamenia. He had seen pressure and ice used without any benefit; and related the cases of two sisters, one of whom was operated on and died soon, the other had no treatment and lives in tolerable comfort.

Dr. **Routh** considered it remarkable that Mr. Cooke, who formerly advocated operations should now be opposed to it. He (Dr. Routh) placed confidence in arsenic as a remedy, and had lately employed galvanism, with benefit in one case, and in others without any good effects.

Mr. W. **Cooke**, in reply, said that he was gratified with the reception his observations had met with. The discussion had strengthened his views as to the desirableness of abstaining from operation. He certainly had begun by following the instructions he had received in the schools, but had been forced by experience to change his opinions and adopt the constitutional treatment, without operation, in the majority of cases. In reply to the objection that, as men have cancer, the cessation of the catamenia could have nothing to do with it, Mr. Cooke reminded the Society that Sir H. Halford and Dr. Paget had written of a climacteric dyscrasia in men, the presence of which would go rather in support of, than be detrimental to, his argument. He had not contemplated entering into the subject of diagnosis, owing to the limited time allotted to the paper, but would, in a word, give "induration" as the necessary accompaniment of cancerous ulcer. The case mentioned by Mr. Canton, of degeneration of the cancer cells, was strongly corroborative of the views put forth in the paper. Statistics would not, he thought, support the opinion that cancer was more prevalent in unmarried than in married persons. Pressure and ice had not been of any service, but rather injurious; whilst galvanism required more evidence, to enable any conclusion to be arrived at.

PATHOLOGICAL SOCIETY OF LONDON.

Dr. Watson, President.

Mr. **Bryant** exhibited the following specimens forwarded to him by Mr. W. Hills of the Kent County Lunatic Asylum:—

I.—IMPACTED FRACTURE OF THE NECK OF THE THIGH-BONE.

A woman, aged sixty-two, an inmate of the

Kent County Lunatic Asylum, when walking in the hop ground on September 17th, 1856, fell upon her hip. When taken up there was found to be shortening of the limb to about half an inch, slight eversion of the foot, and power to flex the thigh; crepitus was only detected after several efforts. A long splint was applied for six weeks, and the patient regained the use of her leg. As she stood there appeared no perceptible difference between the lower extremities, and the patient would not admit there was any dissimilarity. Early in August she was seized with an acute attack of bronchitis, which terminated her life upon November 12th, 1857, fifty-five days after the accident. The specimen presented is an excellent example of this form of fracture; the neck is completely driven into the trochanter, and the small trochanter is fractured and pushed up; perfect union has taken place. The symptoms presented were those generally existing in such cases.

II.—FRACTURE OF THE ANATOMICAL NECK OF THE FEMUR WITHIN THE CAPSULE.

C. F——, aged sixty-nine, a lunatic in the Kent Asylum, upon November 20th, 1857, was pulled off the edge of her bed by a child, and fell upon her right hip. There was some pain in the neighbourhood of the hip-joint, but more particularly in the knee; the shortening was very trivial, and there was no eversion of the foot. The woman could partly flex her thigh, though not without pain, and there was no effusion. Some difficulty was experienced in detecting crepitus, which was done at last by an assistant extending and at the same time rotating the leg inwards. The long splint was applied, and kept on for some weeks; a bed-sore, however, appeared, and from this she sank exhausted on Jan. 8th, 1858, seven weeks after the injury. This specimen, it will be seen, is a genuine case of fracture of the neck within the capsule; the line of fracture is not direct, and upon one half is not to be seen unless some force is employed to separate the parts. The reparative process seems to have progressed fairly; and if the bed-sore had not proved too much for her feeble powers, there seems every reason to believe that perfect reparation would have taken place.

Dr. VAN DER BYL exhibited a specimen of

CANCER OF THE LIVER,

which weighed twelve pounds, and contained several cancerous growths, varying in size from half an inch to four or five inches in diameter. The patient was a young man, aged twenty-eight. Cancerous growths also involved the skull, dura mater, sternum, humerus, lungs, and spleen. The disease had run a very rapid course, and destroyed the patient in less than four months. Cancer of the liver occurred in 29 cases out of 380 post-mortem examinations conducted by Dr. Van der Byl; that is, in upwards of 7½ per cent. of the patients dying from various diseases. Out of these 29 cases, 13 were males and 16 females. The average age of the 13 males was 41·4 years; the youngest was 15 years of age, the oldest 56. The average age of the 16 females was 50; the youngest 33, the oldest 70. The average weight of the liver of the 13 males was 71·5 oz.; the average weight of liver of 12 of the females was 49·5 oz. The average weight of the healthy liver of 26 males was 51·3 oz.; and that of 25 females, 43·8 oz. It was difficult to state exactly in how many of these 29 cases the liver was the primary seat of the cancer, or to be quite sure in which organs the disease commenced. In three cases cancer did not exist in any other organs, and these might therefore be considered as undoubtedly primary cancer of the liver; but in the remaining 26 cases other organs were involved in the cancerous disease, as follows: the lungs in 9 cases; the breast in 7; stomach in 6; uterus in 5; rectum in 2; post-peritoneal glands in 2; lumbar glands in 2; inguinal glands in 2; external genitals in 1; tongue in 1; œsophagus in 1; and membranes of brain in 1 case. By counting the case now brought forward along with the three undoubted cases of primary cancer, it appeared that cancer occurs primarily in about one-seventh of the cases in which the liver is affected by this disease. In the 380 post-mortem examinations, the relative frequency of cancer was as follows: in the uterus, 32 cases; liver, 29; lungs, 19; breast, 18; pleura, 10; stomach, 9; tongue, 6; kidneys, 6; bladder, 5; œsophagus, 4; rectum, 2; external genitals, 2; pericardium, 2; dura mater, 2. Although cancer of the liver did not occur quite so frequently as cancer of the uterus, yet, making an allowance for the proportionally greater number of females admitted with cancer of the uterus, on account of there being special cancer wards at the Middlesex Hospital, whereas cancer of the liver ranks with other internal complaints, it appeared that cancer is far more frequent in the liver than in any other organ. The principal morbid appearances which accompanied these 29 cases of cancer of the liver, were: chalky concretions or cicatrices in the lungs in 8 cases; pleuritis and carnification of the lungs in 3; granular kidneys in 7; fibrous tumour in the uterus in 3; peritonitis in 2; fatty heart in 1; adhesions to transverse colon in 1; jaundice in 2. The liver-tissue intervening between the cancerous growths generally presented a normal appearance; hence, doubtless, the rarity of jaundice, which occurred only in two out of the 29 cases. In one case the liver tissue was noted as somewhat waxy, and in one case as fatty.

The PRESIDENT thought that cancer of the rectum was pretty frequent; he had met with more examples of it than in the liver.

Dr. WILKES was glad to find that primary cancer of the liver was even rarer than Dr. Van der Byl had stated, which his own observations tended to confirm.

DR. OGLE exhibited

A CANCEROUS CYST OF THE LIVER,

which was taken from a patient whose liver was united to the diaphragm and abdominal parietes by adhesion. On making a section over the cancerous tumour of the liver, a quantity of fluid gushed out, showing that the disease had assumed here the character of a thick-walled cyst. There was a tendency to softening towards its surface.

Dr. Markham related the particulars of a case of

ENLARGED THYROID AND THYMUS GLANDS, WITH DISEASE OF THE HEART AND PROMINENT EYEBALLS,

and showed various specimens in illustration. The patient was a young woman, twenty-six years of age, who suffered from rheumatic fever six years ago, and lately the thyroid gland commenced to enlarge. She was a patient in St. Mary's Hospital two months before death, and suffered from violent palpitations of the heart; she was exceedingly nervous, and the heart struck like a hammer against the chest. The thyroid body was much enlarged, and pressed upon the carotid arteries and jugular veins, but not upon the trachea. The eyes were prominent and full, and the lids could not be closed for some weeks before death. There was no inflammation of the conjunctiva. She experienced no benefit from treatment, and died suddenly from inflammation of the lungs. The thymus gland was remarkably enlarged and spread out, and weighed two ounces and a half. There was a deposit of fibrous material in the substance of the heart.

The President asked if the eyes had been examined, and if any physiological explanation could be given of their prominence?

Dr. Markham replied they had not.

The President had seen four of five cases of this kind, but none had terminated fatally.

Dr. Markham also showed a specimen of

RUPTURE OF THE COLON

from distension of air in the gut itself, in a female aged sixty-five. She was for seven months ill with distension of the bowels, and had the ordinary symptoms of obstruction. She could not pass anything without difficulty, and the seat of obstruction was supposed to be about the colon or upper part of the rectum. After death, eight pints of thick pultaceous matter were found in the peritoneal cavity and about four pints in the bowels; altogether, a gallon and a half of bleached fæculent matter, free from smell, from the fact of her having taken charcoal for some time. There was no inflammation nor ulceration about the rupture, which was distinct enough. Death was sudden.

Mr. Callender exhibited a

FIBROUS TUMOUR OF THE UTERUS,

taken from a patient of Dr. West's, who was admitted into St. Bartholemew's Hospital in 1852. She had received a violent blow on the back, and had a protracted discharge from the vagina. A polypoid growth projected from the os uteri. During the two or three following years she underwent various operations for the removal of this. Up to March, 1857, she was able to go about, although feeble from uterine hæmorrhage; she entered St. Bartholemew's again, and died from the latter cause. A large tumor was found attached to the posterior part of the uterus, of the same character as that present in its interior. She had secondary deposit in the lungs. There was also a tumour implicating the sixth cervical vertebra.

Mr. Callender also showed a photograph of

AN AUSTRALIAN ABORIGINAL,

of Moreton Bay, sent over for the museum of St. Bartholomew's by Mr. Ward, of the Royal Navy. It illustrated the coarse method of tattooing across the chest employed by the natives, the skin resembling a series of transverse ropes.

Mr. Spencer Wells presented an example of

CYSTIC TUMOUR OF THE CERVIX UTERI,

which he had removed from a woman forty-three years old, at the Samaritan Hospital, with the *écraseur*. She was the mother of seven children, the youngest of which is seven years old. She has been a sufferer since the birth of the last with a profuse leucorrhœal discharge. Eighteen months ago the uterus protruded; there was nothing malignant about it.

Mr. George May exhibited

A HEART IN WHICH GAS MIXED WITH BLOOD WERE FOUND,

taken from a patient, who died suddenly from rheumatic fever; this was preceded by paralysis of the legs from cold taken in a bath. Delirium and convulsions preceded death, and a quantity of air was found in the veins and heart. He believed that this was the immediate cause of death.

Mr. T. Holmes narrated the particulars of a case of

ABSCESS IN THE WALLS OF THE HEART.

The patient was a child seven years of age, with caries of the os calcis, and who died of secondary deposits in the lungs and cellular tissue. Fibrous vegetations were present at the posterior part of the mitral valve corresponding to the side of the cavity of the abscess in the cardiac walls, but there was no opening leading into the latter. This abscess was a secondary deposit, and had commenced within the pericardium.

Mr. Leggatt exhibited a

RUPTURE OF THE FEMORAL ARTERY,

the result of disease, with a large ragged opening, appearing as if from ulceration within. The patient was a man seventy-three years old, stout and robust, the subject of gout for forty years. Ten years ago he had acute albuminuria, and latterly his urine was albuminous. He was subject to giddiness during the last four or five years, and numbness of the lower extremities. Symptoms of angina pectoris were also present for the last four months. The whole of the affected limb was swollen, and filled with loose clots of blood about the thigh in the vicinity of the rupture. Many of the bloodvessels were diseased, and the heart and pericardium were found universally adherent.

Mr. HUTCHINSON showed a sample of

ENCHONDROMA OF THE TESTICLE,

with spots of cartilage scattered throughout, taken from a man forty-three years old, in whom it had rapidly grown of late. He recovered from the operation.

Mr. HUTCHINSON also related the particulars of a case of

DEATH FROM HEREDITARY SYPHILIS,

in an infant, after a month's illness, with disease of the heart. The pericardium was distended with coagulated blood, the source of which was not ascertained. The father and mother had primary syphilis two months before the delivery of the latter. The child was healthy one month before its death, but there was no direct evidence that the mother actually had syphilis.

DR. VAN DER BYL exhibited several specimens, and made some

REMARKS ON SEVENTY CASES OF HYPERTROPHY OF THE HEART.

The first specimen weighed thirty ounces, and occurred in a man aged thirty-three. The aortic valves were covered with vegetations, but the aorta was healthy. The cavity of the left ventricle was four inches in length, and about three times its usual size; its wall measured seven lines near the middle. The second specimen also weighed thirty ounces, and occurred in a man aged sixty-two, who had suffered from chronic bronchitis, &c. The cavity of the left ventricle was four inches in length, and its wall measured nine lines near the middle. The valves were not much diseased; the arch of the aorta was dilated to about double its natural size, and involved in advanced atheromatous disease; the pulmonary artery contained distinct patches of atheromatous deposit. The third specimen weighed thirty-six ounces, and occurred in a man aged twenty-eight, who had had rheumatism five years before, and had been troubled with dyspnœa and palpitation ever since. The cavity of the left ventricle was five and a half inches in length; its wall measured nine lines near the middle (fifteen lines opposite the papilla of the mitral valve); the aortic valves were shortened and thickened, and proved incompetent; the mitral valves were slightly diseased. In the right auricle there was a slender fibrous band, about an inch and a quarter long, one extremity of which was fixed at the so-called tuberculum Loweri, and the other at the Eustachian valve. The fourth specimen weighed fourteen ounces and a half, and occurred in a man aged forty-two, who had been subject to palpitation since childhood. The mitral orifice was very much constricted, and presented only a crescentic slit; the valves were thickened and calcified; the aortic valves also were shortened, thickened, and calcified. In this case there was comparatively little hypertrophy with extensive disease of the aortic and mitral valves; whereas, in the third specimen, which weighed thirty-six ounces, there was scarcely any valvular disease. With regard to the fibrous band in the right auricle of the third specimen, it appeared doubtful whether this was a relic of fœtal life, or the result of disease. In the Middlesex Hospital museum there is a preparation which exhibits a similar band, the left extremity of which, however, is fixed to the free margin of one of the tricuspid valves. It occurred in a boy aged sixteen, and produced a "tricuspid murmur." A third specimen of this kind was exhibited, in which the band was about two inches long and gave off numerous tendrils, which formed a kind of floating network. Hypertrophy of the heart occurred in 70 cases out of 380 post-mortem examinations; that is, in 18·4 per cent. of patients dying from various diseases. In all these cases the heart weighed upwards of fourteen ounces in the adult male, and upwards of twelve ounces in the females. Of these 70 cases, 46 were males and 24 females. The average age of the males was 43·3 years; the average weight of their hearts was 19·3 ounces. The average age of the females was 41·6 years; the average weight of their hearts was 15·6 ounces. Some of the principal morbid appearances associated with hypertrophy of the heart in these 70 cases were: disease of the aortic valves in 36, of the mitral valves in 32 (in 22 of these, aortic and mitral diseases coexisted); vegetations on the aortic valves in 9, on the mitral valves in 5; adherent pericardium in 9; atheroma of the aorta in 13, of the pulmonary artery in one; cerebral hæmorrhage in 4; bronchitis in 10; phthisis in 7; granular disease of the kidneys in 46; cirrhosis of the liver in 21; &c. The eight volumes of the "Transactions of the Pathological Society" contain accounts of 40 cases of hypertrophy of the heart, in which the weights are given. Of these, 34 were males, and only 6 females. The average age of 31 of the males was 44 years; the average weight of the heart of the 34 males was 22·1 ounces; the heaviest weighed 40 ounces. The average age of the females was 37·5 years; the average weight of their hearts was 17·5 ounces. Disease of the aortic valves occurred in 28, of the mitral valves in 17; in 14 cases aortic and mitral disease coexisted. From this analysis of Dr. Van der Byl's observations, and of the cases recorded in the "Transactions," it appears: 1. That hypertrophy of the heart occurs in nearly 18½ per cent. of patients dying from various diseases. 2. That it is about twice as frequent in males as in females; or, exactly, as 8 to 3. 3. That the average age of males and females is nearly the same; that of the males being 43½ years, and of the females 39½. 4. That in hypertrophy of the heart, disease of the aortic valve is more frequent than disease of the mitral valves; as 8 to 6. 5. That in hypertrophy, vegetations are more frequently situated on the aortic than on the mitral valves. 6. That adherent pericardium exists in about one-eighth of the cases. 7. That granular disease of the kidneys occurs in about two-thirds of the cases.

The **President** asked whether, in the eight cases of hypertrophy of the heart without valvular disease, mentioned by Dr. Van der Byl, there was any granular disease of the kidneys?

Dr. **Van der Byl** could not say without referring to his paper.

Dr. **Quain**, asked if any mistake had occurred in the thirty ounce weight of the first case, as it seemed very small? To which a reply was given that there had been no mistake.

Dr. **Markham** exhibited two examples of

CYSTIC DISEASE OF THE KIDNEY,

taken from a man who fell down insensible in the street, and died in two hours. He had enjoyed excellent health, and his sudden demise was due to apoplexy, blood filling one of the ventricles. One kidney weighed twenty-one ounces on removal, the other was not so large, but both were similarly affected, with cysts varying in size from that of a walnut to minute points. The urine contained very few granular casts, and was albuminous. Dr. Markham thought it somewhat singular that life should have been carried on so well with such an amount of disease.

Mr. **Mitchell Henry** asked if the contents of the cysts were examined. Dr. Bence Jones had submitted such cysts to analysis, and none of the elements of urea were found.

Dr. **Markham** thought that such quantities could not give positive results.

A committee was appointed to examine them.

Dr. **Bristowe** entered into the subject of the

CONNEXION BETWEEN DYSENTERY AND ABSCESS OF THE LIVER,

and exhibited several specimens. He stated that Dr. Budd had assumed that abscess in the liver is always secondary to ulceration of some portion of the intestines. Of the records of 308 cases of ulceration of the intestines, at St. Thomas's Hospital, abscess of the liver was associated only in four, and one of these was a case of dysentery. There were eighteen cases of abscess of the liver in the 308 cases, but four of the eighteen were the result of hydatids. Five of the remaining fourteen were from general pyæmia, without disease of the bowels. Of the nine remaining cases, six were associated with ulceration of the intestines, and three were not. In two of the six, the ulceration was subsequent to abscess of the liver.

The first specimen exhibited was from a man admitted September last, ill four weeks with diarrhœa. After death, dysenteric ulceration was found, with abscess of the liver; it certainly supported Dr. Budd's view.

The second was from a man, aged thirty-one, admitted Sept. 22nd, with diarrhœa of six weeks' duration. He had no rigors. An abscess formed in the liver, perforated the diaphragm, opened into the lung, and communicated with the bronchial tubes. He died. Ulceration of the large intestine was found to be quite recent; and dysentery secondary to the abscess of the liver.

The third specimen was from a man, whose liver had an enormous abscess and several smaller ones. Ulceration of the large intestine quite recent, as in the last case. He had passed pus by the bowels before death.

The fourth case was somewhat similar to the foregoing.

These cases were intended to show that the assumption of Dr. Budd was not borne out by facts.

Mr. **Henry** said, that seven years ago, Dr. Baly exhibited an example of abscess of the liver following dysentery. At the Milbank Penitentiary, where there was so much dysentery, he had not met with another instance of it.

Dr. C. B. **Williams** observed, that the only instance he could recollect of abscess in the liver consecutive to dysentery was in a man who had been in a hot climate. When he saw him he had abscess in the liver, and it ended fatally. The abscess was lobular, and affected small portions only, as described by Dr. Budd. He thought that hepatic abscess was rather a consequence of dysentery contracted in hot climates, than in the form met with in this country.

Dr. **Ogier Ward**, in confirmation of what fell from Dr. Williams, said that in the epidemic of dysentery in Glasgow, in 1827, there was not an abscess of the liver in a single case.

Dr. **Murchison** asked if the lining membrane of the gall-bladder and ducts were carefully examined, as the cases of Dr. Bristowe would not be conclusive unless it were ascertained whether there was a gall-stone present in any of them.

Dr. **Bristowe** replied that some were examined; none, however, communicated with the bowels; the ducts were all sound.

Dr. **Murchison** recollected two cases in Burmah of abscess of the liver without dysenteric ulceration; he was opposed to Dr. Budd's views.

The **President** observed that Dr. Budd does not state it as a necessary, but an accidental consequence of dysenteric ulceration. He asked Dr. Bristowe, in cases where the two exist, if he had any mode of explaining how ulceration of the bowels has occurred in his case of abscess of the liver.

Dr. **Bristowe** thought the cause which produced the abscess of the liver also occasioned ulceration of the bowels.

Dr. **Risdon Bennett** exhibited specimens of

EPITHELIAL CANCER OF THE BASE OF THE SKULL,

taken from a man who died in St. Thomas's Hospital. He complanied of pain over the left ear and deafness. His aspect was healthy. Subsequently numbness occurred on the left side of the face, difficulty of deglutition and articulation; then deviation of the tongue to the left side, the organ seemed swollen, and he died asthenic, without any comatose symptoms. Ulceration of the posterior part of the pharynx was found, which proved to be epithelial cancer, involving the body of the spheroid bone. The brain was quite healthy.

Mr. T. Holmes showed a

GUNSHOT WOUND IN THE SKULL

of one of the men who died from injuries received at the recent attempt on the life of the Emperor of the French. The wound had taken place through the frontal bone by a piece of the grenade, which was found in the skull. He thought it sufficiently interesting to bring before the Society.

Mr. Holmes also showed a preparation of a

SPONTANEOUSLY HEALED ANEURISM OF THE CŒLIAC AXIS,

which he brought forward as a good instance of the power of Nature in healing an aneurism. It existed at the root of the cœliac axis, the three divisions of which were seen at the distal side of the tumour. There was no history of the case, which was that of a man admitted into the St. George's Hospital, with symptoms of hypertrophy of the heart, pleurisy, and hydro-thorax.

Dr. Ogle exhibited a specimen of

SPONTANEOUSLY HEALED ANEURISM OF THE ARTERIA INNOMINATA.

The sac was filled with coagula, and the corotid artery was blocked up; the head of the clavicle was increased in size. The patient, a sailor, who was in St. George's Hospital many months, went out and followed a different trade for five years, and then returned to the hospital and died of phthisis. The aneurism arose originally from a strain on board ship.

Dr. Barker related the particulars of a case of

PYÆMIA FOLLOWING RHEUMATISM,

in a girl, thirteen years of age, who was admitted into St. Thomas's Hospital, and was ill one week with rheumatism. All the joints were swollen, the knee especially, and there was no part of the body free from excessive tenderness. Over the right femoral vein there was a blush of redness. She died a few hours after Dr. Barker saw her. In the right knee-joint there was pus, and in the left synovial fluid; the right femoral vein was affected with phlebitis and contained a clot of blood and pus. Secondary abscesses were present in the lungs and left ventricle of the heart.

The President asked if the case might not be one of phlebitis followed by pyæmia.

Dr. Barker said he did not say the case was one of rheumatism.

Dr. Bristowe observed that he was responsible for the name, and he believed it was partly rheumatism; the opinion was supported by the fact of the knee-joint containing synovial fluid.

HARVEIAN SOCIETY.

Dr. Hamilton Roe, President.

Mr. Haynes Walton read a paper

ON SOME FORMS OF IMPAIRED VISION, AND THE USE OF THE OPHTHALMOSCOPE.

The author commenced by saying that almost every state of impaired vision not accompanied with palpable objective symptoms, was at a time not long past attributed to aneurism, a term as yet too uncertainly and too generally applied. More recently it had been supposed that an unhealthy choroid coat was productive of many of the symptoms formerly thought to proceed from deterioration of the nervous apparatus, and choroiditis became a fashionable disease. The paper stated concisely, that from the rapid strides made in ophthalmology, and by the improvement in our diagnosis, much of the obscurity, confusion, and error which have prevailed respecting impaired sight have been removed, and that necessarily our therapeutics have also progressed. Amongst the latest and most important was Dr. Mackenzie's discovery, that asthenopia, or incapability of sustaining the eye in a state of adjustment to near objects, is a distinct, well-marked, and not uncommon affection. These were the chief characters of the affection:—In the first instance, fatigue of vision is complained of after employment of the eyes on any of the accustomed pursuits. Afterwards, confusion and obscurity prevail, sometimes attended with heaviness in the head, or actual headache. If the occupation has been that of needlework, the stitches can no longer be seen; if it has been reading, the lines seem to run into each other, and then complete indistinctness ensues. A momentary remission, either by looking at distant objects or shutting the eyes, affords temporary relief, and the objects again become distinct. On the other hand, the injurious effects of prolonged occupation have always been evinced in the greater aggravation of the symptoms. There were not in general objective symptoms. No redness of eye, no abnormal state of pupil, nor any external evidence of a morbid state. There is not necessarily any intolerance of light; but in the large majority of cases, a bright day is rather disagreeable; bright artificial light is trying, and sometimes the intolerance is very marked. As a rule there is no evidence of a deranged state of the functions of the body, but general feebleness of system is most commonly present, and the class of persons in humble life that are most subject to asthenopia are, above all, girls who are thin, ill-fed, and who lead sedentary lives, tailors, compositors, and clerks of all kinds, especially those employed in lawyers' offices. Asthenopia is undoubtedly, in the main, loss of focal adjustment, or debility of the apparatus by which the eye is adjusted for the vision of near objects; but it is something more, and the views of Dr. Mackenzie, as expressed in his paper on the subject in the *Edinburgh Medical and Surgical Journal*, No. 156, support this, and are to the effect that the retina is partly involved; but that there is no considerable change of structure in it, no atrophy, is manifested from the fact that the power of vision is not permanently impaired. The minutest objects are seen for a time as clearly as in the natural state of the eye. In the incipient state, general treatment with rest of the eyes is often very beneficial, and the tonic plan is indicated. He should omit other important curative means, were he not to speak of exercise of the eyes on distant objects. He must confess that well-marked cases of asthenopia are seldom cured. Fortunately, although the affection should grow worse, it does not end in blindness; there is merely an aggravation of the symptoms. Persons with asthenopia are very apt to make themselves worse by using convex glasses. Sometimes they are beneficial, but certainly not generally. It can only be in the early stage that amaurosis or loss of visual power from some defect in the brain, optic nerve, or retina, could be mistaken for asthenopia; when the nervous apparatus only is at fault, there is an existing imperfection of sight, extending to all bodies, whether minute, near, or far, and usually the power of seeing improves a little after the eye has dwelt on an object. In asthenopia the sight becomes dim only after looking at near things for a time, which varies from a few minutes to hours. He was not willing to admit the existence of choroiditis as a distinct affection. Different writers ascribe the same symptoms to choroiditis, retinitis, and sclerotico-choroiditis. The author had come to the conclusion that, so far as practical treatment is concerned, the important matter is to endeavour to ascertain the several states as induced by constitutional causes, as, for instance, by depressing influences, or as a part of the general constitutional affection, as in gout, rheumatic syphilis, and the various effects of the morbid action commonly called, but certainly not expressed, by the term inflammation.

The Ophthalmoscope, or Speculum Oculi.—The ophthalmoscope has wonderfully changed and improved our existing ideas of the pathology of the retina and the choroid. (The principle of the instrument was explained.) Except the pupil be large or dilatable, but a small part of the retina can be seen, so that adhesions of the iris to the lens limit or prevent its adaptation. Then opacity of the lens necessarily prevents the light from being thrown into the eye. The advantages of the ophthalmoscope could not be over-estimated. We can examine the interior of the eye by its aid as certainly as its surface; and although we may and do find sometimes all the beautiful appearance of health associated with blindness, we more commonly detect changes that account for the subjective symptoms. Some of these marked alterations are readily understood, and can be associated with the symptons as cause and effect, but some cannot, and the work yet before the ophthalmologist is to unravel these diseased conditions, and trace them to their several origins.

The particulars of several cases from Mr. Walton's note-book were read to illustrate the usefulness of the instrument, and to show what changes do occur. Afterwards, two patients were exhibited to demonstrate the practical application of this appliance; in one of which there was effusion between the retina and the choroid; and, in the other, preternatural vascularity of the retina.

Mr. Ernest Hart agreed with Mr. Walton that asthenopia, or weak-sightedness, is not due to inflammation, and that the disease has been always best treated by tonics. Dr. Mackenzie considered that asthenopia was a weakness of the muscular tissue. It might be so of the nerve tissue. Choroiditis was not to be looked upon as a too great refinement of diagnosis, and his views on that subject were not in accordance with those enunciated in this paper. The most hopeful results would accrue from the use of the ophthalmoscope, which he used constantly with the most valuable effect. At the same time it should not be recommended indiscriminately, since caution is needed in its use when the eye is inflamed, or susceptible of inflammation.

Dr. Fuller asked if any particular tonic was indicated in the treatment of the disease? He had found the internal use of strychnine very effectual.

Dr. Handfield Jones had employed strychnine in two cases with good results. In one it was applied locally.

Mr. Ballard had a patient, the mother of many children, who, whilst suckling, was seized with marble blindness, accompanied with severe pain in the forehead. The application of a few leeches aggravated the complaint; he then gave tonics and stimulants, and she soon recovered.

Dr. Hart Vinen had seen a case of marble blindness accompanying a case of uterine hydatids lasting two years. The hydatids being removed, the sight returned.

Dr. Goolden referred to two cases of blindness in railway guards. Bleeding was resorted to in the first case, and the patient remained blind. The other was bled and had mercury; he then saw objects, but without colour, and ultimately recovered his sight completely.

Mr. Walton then exhibited the use of the ophthalmoscope upon a healthy and a diseased eye.

WESTERN MEDICAL AND SURGICAL SOCIETY.

James Lane Esq. in the Chair.

Mr. Martyn communicated a report of

TWO CASES OF DISEASE OF THE ŒSOPHAGUS, ONE INVOLVING THE OPERATION OF TRACHEOTOMY.

The first related was that of Miss L——, aged thirty-eight. She has had symptoms of obstruction about the lower end of the œsophagus for ten years. She knows no cause, excepting that she is very thin and weak; she is otherwise healthy. For a considerable time the difficulty of swallowing anything but fluids &c. has increased, and even liquid food is often partly rejected. The presence of food causes great pain and distress, referred to about the lower part of the œsophagus. A more constant pain affects the left, upper, and back part of the neck, and top of the left shoulder, of which she complained much. She has no rest until any lodging food is rejected, and this is done by urging, and a kind of vomiting, which happens more or less nearly after every meal. It was observed, that however long food might have remained, it was perfectly undigested when returned. The contents of the stomach never appeared, neither bile, in what was rejected. On gently introducing a No. 12 bougie, it met with little obstruction, but caused great pain on nearly reaching the stomach. On reviewing the various conditions which might cause such symptoms (the long duration of the malady, and the absence, as he thought, of the cancerous cachexia, precluding the idea that it could be of a malignant nature), he (Mr. Martyn) concluded that the case was one of stricture of the œsophagus, attended with ulceration of the mucous lining at this part. The case continues under treatment.

The second case was one of primary stricture of the œsophagus, ultimately involving the larynx, and terminating fatally. Mary Anne G——, aged thirty-one, had been affected with serious difficulty of swallowing for four years. It commenced *immediately* after the subsidence of some enlarged glands, situated underneath the jaw; these were reduced by painting with iodine. The patient was otherwise well, excepting that she was anæmic in a marked degree. The difficulty of swallowing soon became so great, that she was obliged to confine her diet to fluids and *sops*. It was referred to a point just behind the larynx. There was also considerable pain latterly felt at this part. In October of last year she lost her voice, and had frequent and violent cough especially after taking fluids; sometimes a little blood appeared. Her breathing rapidly grew difficult. When first seen by the author on Nov. 25th, she was suffering from the foregoing symptoms in a greatly aggravated degree. At this time she presented the appearance of an advanced stage of consumption. In a short time the breathing became rapidly obstructed, so that suffocation was imminent, and swallowing almost impossible. For some days, with great effort, she could scarcely get down teaspoonfuls. Opening the trachea became necessary, which Mr. Martyn did in the usual way on the night of November 30th. The relief to the patient was very great; she soon could swallow pints of nourishment in the day. She rapidly gained flesh and strength. In a fortnight the old difficulties of swallowing returned. It was difficult to pass the smallest catheter to feed her. Enemata of broths were used. The larynx remained obstructed perfectly. On January 8th, thirty-nine days after tracheotomy, a considerable swelling of the face and neck took place, attended with great pain, and preceded by shivering and constitutional disturbance. In three or four days the swelling subsided, and shortly afterwards a discharge of offensive pus took place into the pharynx. She sank in four days from this time. The post-mortem examination revealed a large abscess behind the pharynx and œsophagus, extending far into the posterior mediastinum; the carotid artery and jugular vein of the left side were found bathed in the pus, their sheath being destroyed at about the middle of the neck, &c. The œsophagus was thickened by a deposit of fibrous tissue, forming the stricture opposite the cricoid cartilage, narrowing the canal so as just to admit a small bougie. Extensive ulceration of both the inner surfaces of the œsophagus and larynx had taken place, almost to the entire destruction of the mucous membrane of these parts. It had perforated the larynx just at the upper margin of the cricoid cartilage beneath the internal angles of the arytenoid cartilages. The peculiarity in this case, the author observed, was, in the necessity for opening the trachea, and the great advantage that resulted from it, prolonging, as it did, the life of the patient for seven weeks, and at one time promising the possibility of ultimate recovery.

The diseased parts were shown to the Society, and Mr. Lane likewise produced a preparation from a young subject, showing stricture of the same part of the œsophagus, and ravages of the mucous membrane reaching the larynx, with, also, a perforation into it, but at the lower margin of the cricoid cartilage, remarkably similar in most respects to the above.

NORTH LONDON MEDICAL SOCIETY.

Mr. Erichsen, President.

The President made a communication on

DISEASE OF THE SACRO-ILIAC SYNCHONDROSIS.

He stated that in the observations he was about to make, he intended to depart from the usual custom of the Society—that of "reading a paper." His communication would be oral, not written. Medical societies were of two kinds: the purely scientific, which published "Transactions;" and those which partook of a mixed character, being social as well as scientific, having for their object the bringing together of practitioners practising in the same neighbourhood, and thus establishing a good and friendly feeling in the profession. Now, in the purely scientific societies, it was desirable that the communications made should be in writing, in order to secure that accuracy which was necessary for purposes of publication, and to avoid the possibility of after dispute as to opinions advocated. But in local societies, such as this, he thought that *written* communications might very advantageously be dispensed with in many instances, and oral ones substituted. He believed that the labour of "writing out a paper" deterred many, as it had often done him, from bringing forward communications, and that members listened with more interest and attention to what was spoken than to what was read. He, therefore, would make the following communication orally, and hoped that that example would be followed, as he felt sure it would be advantageous to the Society.

Sacro-Iliac Disease.—Mr. Erichsen remarked that this disease had received less attention from writers on surgery than its importance deserved. It was of especial importance in reference to those forms of hip-disease which commenced in the pelvic bones, and which had acquired special interest of late in consequence of being subjected successfully, in many cases, to operative interference. The disease in question appeared to be of a strumous character. It affected chiefly young adults between the ages of eighteen and thirty. He had not noticed it in children. The reason of its occurrence in young adults might possibly be that the sacro-iliac articulation undergoes a change as the subject approaches adult life. In infancy, a synovial membrane is found there which, according to anatomical writers, disappears when the period of puberty is reached. The symptoms which characterize this disease are—pain, of a dull, aching character, about the hip and gluteal region, increased on pressure along the line of articulation; the occurrence of an indolent swelling, which slowly suppurates; a degree of lameness, as characterized by stiffness of gait, and inability to stand on the affected limb; lengthening of the limb on the affected side, in consequence of the side of the pelvis being pushed forward; and, lastly, abscess, which may present in several situations—in the articulation, in the gluteal or lumbar regions, or be intra-pelvic. The prognosis in these cases was unfavourable, the patients generally eventually dying of hectic. The diagnosis was important. It had to be made from hysterical affections of the hip, from sciatica, from coxalgia, and from spinal diseases. The author entered minutely into these points of diagnosis. As to the treatment—rest, counter-irritation, and anti-strumous measures, constituted the chief means to be employed.

In connexion with this subject, Mr. Erichsen mentioned the particulars of two cases in which he had recently resected the upper end of the femur, with considerable portions of diseased pelvic bones: in one case removing the tuber ischii, the ascending ramus of the ischium, the acetabulum, and a portion of the ilium, the patient doing well.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, col'ectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Proœmium.

KING'S COLLEGE HOSPITAL.

A case of Direct Inguinal Hernia of eighteen months' duration, in which was Performed a New Operation for its Radical Cure.

(Under the care of Mr. JOHN WOOD.)

THE operation for the radical cure of reducible hernia, as recommended by Wutzer of Bonn, has been tried with sucess in several of our hospitals during the last three or four years, and several cases have been recorded in our "Mirror."

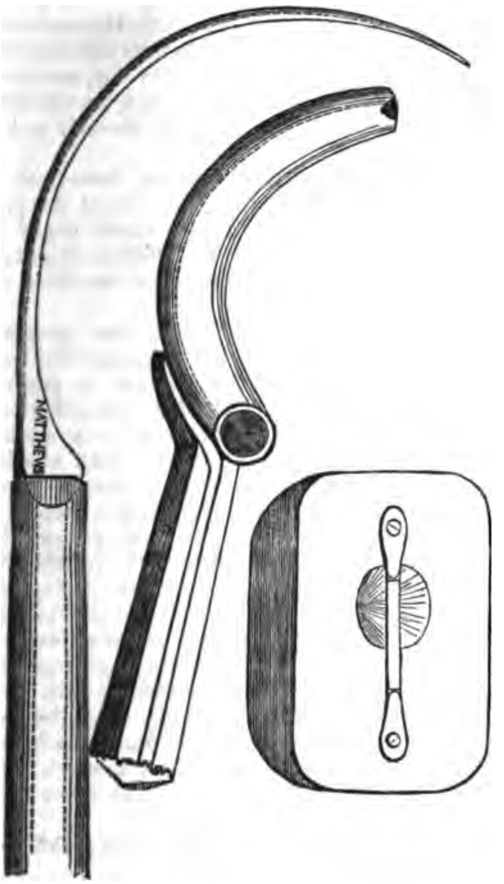
More recently, a new method of curing hernia radically, by a simple process, has been invented by Mr. Wood, of King's College Hospital; and from what we have seen of it, together with the state of the parts in the patient successfully submitted to it, we are inclined to think more favourably of it than of any other. The main features of this operation consist, 1st, in its being conducted subcutaneously, insuring a more ready and less painful healing; 2nd, in the introduction into the canal of the two layers of superficial and intercolumnar fasciæ, which are unusually abundant and strong under the condition of hernia, and which are made to cohere into a solid plug by adhesion of their apposed surfaces, made raw by the subcutaneous separation from the skin, and are also supported and kept in position in the canal by the new adhesions contracted below by the skin from which they were separated; 3rd, in the drawing together and close union of the sides of the enlarged external ring by the lateral traction of the ligature upon them, caused by its passing through the same opening in the skin and in the compress upon it, and tying them down by consequent permanent adhesion to the invaginated plug of fasciæ behind them; and 4th, in the firm compression made upon the part during the formation of the adhesions, and their consequent greater extent and firmness, by the traction of the ligature upon the boxwood compress.

Mr. Wood is of opinion that the distinct evidence as to the position of the hernial sac of peritoneum and of the cord through the opening in the skin, and the great certainty that the feel of the tube gives that its position at the extremity is close behind the aponeurosis of the external oblique, and has no intervening structure necessary to be avoided between it and the surface, remove almost entirely the danger of puncturing the sac in this operation; while he supposes that the succeeding pressure may operate after a while in producing adhesions of the opposed surfaces of the doubled-up sac. The operation leaves no dimple or deformity whatever; the cicatrices are very small and slight, and after a time will become nearly imperceptible.

John C——, aged twenty-five, a printer, applied at the hospital with a direct inguinal hernia on the right side, to which he had been subject eighteen months, with frequent obstruction and constipation of the bowels, and after meals had suffered from great pain and distress in the part. He has tried seven trusses, none of which had power to retain the bowel. The last he tried produced such irritation as to give rise to a series of abscesses in the groin, which was the direct cause of his application. The abscesses being healed, and the patient disposed to submit to an operation for permanent cure, the following was performed:—

On examination, he was found to have a hernia projecting into the scrotum, producing a tumour, which he said sometimes reached the size of his two fists. On reducing it, the external ring and the internal opening were found to be enlarged, so as to admit the ends of three fingers, the margin being lax and loose. On the slightest cough or exertion, the bowel immediately dropped down into the scrotum.

Description of the Instruments.—The instruments used in this operation consist of, 1st, a tube two inches and a half long, mounted on a strong handle, about three inches and a half in length, curved in a circle of an inch and a half radius, and flattened into an oval at one end, and forming a linear aperture a quarter of an inch wide at the point: 2d, a strong needle, having a corresponding curve, with a perforated point, projecting a full inch beyond the end of the tube when passed through it, and mounted on a strong handle: 3d, a box-wood pad or compress, two inches by one and a quarter, perforated by a hole at half an inch from one end, and crossed longitudinally by a bar of iron wire screwed on to the upper surface: 4th, a subcutaneous section knife, with a sharp point, a narrow blade, and an inch of cutting edge. The engraving represents the three first-named instruments.



Operation.—The patient being laid on his back, with the legs a little drawn up, and the hernia returned, an incision, about three-eighths of an inch long, was made through the skin only, over the cord, about an inch and a half below the external ring, with the subcutaneous knife, which was then carried close under the skin, so as to separate a circle of the superficial fascia around the opening of two inches in diameter. The detached fascia was pushed up in the inguinal canal by means of the curved tube, the end being placed through the opening in the skin. The extremity of the tube was then carried behind and close to Poupart's ligament, or the external pillar, to the extent of an inch and a half from the pubic spine. It was then felt, by depressing the handle, to raise the external pillar upon the extremity. The needle, carrying the thickest silk ligature, was then protruded through the tube, and pushed through the external pillar and the skin, the latter being previously drawn considerably downwards and outwards. The needle was then withdrawn, leaving one end of the ligature on the surface. The end of the tube was next shifted upwards and inwards, and made to protrude behind the internal pillar, as far as possible from its margin. Through this the needle was then passed, and the skin moved upwards and inwards till the point appeared at the opening previously made. The ligature was then freed, and the needle withdrawn, the tube being still held firmly in its position. The ends of the ligature were next passed through the hole in the boxwood compress, one on each side of the wire bar, over which they were then drawn close and tied firmly, so as to retain the pad close down to the end of the tube in the canal, which was then withdrawn. It will thus be seen that the first passing of the needle pierces not only through the external pillar of the external ring, but through the origin of the internal oblique and cremaster muscles, from Poupart's ligament behind it: and at the second passing, it goes through, not only the internal pillar, but also the conjoined tendon of the internal oblique and transversalis muscles, which is placed behind it, so that the sides of the inguinal canal are drawn together from end to end by the ligature. The wound in the skin of the scrotum was drawn firmly together by plaster, a fold of linen placed upon it, and the whole secured by a spica bandage; the patient being ordered to remain in bed, and to use no exertion whatever.

The bandage was removed on the third day, when the subcutaneous puncture was found completely healed by the first intention. The compressed ligatures were retained till the fifth day, some œdema and suppuration having by this time appeared around them, with considerable soreness and pain in the groin. The opening for the ligature looked red, healthy, and suppurating. It was dressed with wet lint and oil-silk, a large compress, and spica bandage. In a fortnight it was completely healed. No irritation nor swelling of the testicle occurred in the course of treatment, nor any symptom of peritonitis.

At present, three weeks after the operation, the external ring is felt by the finger, pushed up beside the cord, to be completely blocked up by a broad band of fascia passing across it and up along the canal, with the cord passing by the lower part. The side of the canal are felt adherent and consolidated. There is no *ballottement* whatever felt on coughing; the groin of the side operated upon being more firm and resistant, in fact, than the opposite, which has always been a little weak. The patient was ordered to wear a truss for some months, to consolidate the part and protect the newly-formed tissues. The skin is firmly adherent to the subjacent structures at the point of the punctures and subcutaneous separation. He has since undergone a severe test as to the efficacy of the cure in an attack of bronchitis, from which he has completely recovered, without in the least affecting the site of the hernia.

Two Cases of Stone in Men, aged Fifty-two and Sixty-four Years; Lithotomy followed by Rapid Recovery.

(Under the care of Mr. Fergusson.)

When stone has been present for many years, in a youth, for example, and has had time to produce mischief, such as coating the mucous lining of the bladder with deposits, and vitiating the system generally, the operation for its removal is rarely successful. A lad thus affected was operated upon by Mr. Cock, at Guy's Hospital, a few weeks since, and a fatal result ensued. We now present two instances in which lithotomy was performed on two adult patients, with recoveries as rapid and as satisfactory as could be desired. We watched them from time to time, and not a bad symptom showed itself. This may, to some extent, be due to the manner in which Mr. Fergusson performs his operation, which is completed generally in forty seconds, although in one of the following cases it was done in thirty. After making his incisions, and withdrawing the knife, he introduces his left forefinger slowly into the bladder, along the staff, dilating the parts as it enters, and then he feels for the stone. The staff being now removed, the forceps is introduced over the finger into the bladder, the finger is withdrawn as the instrument enters, the urine gushes out, and the stone tumbles between the blades of the instrument, and is then gently withdrawn. This is a feature almost peculiar to Mr. Fergusson, and has been witnessed on many occasions. If, however, the stone is too large to be caught in the forceps in this way, it is laid hold of in the bladder, and by cautious movements extracted. After the operation is over, an instrument, called a searcher, is introduced into the bladder, by means of which, should another stone be present, it is immediately detected. In the first of the two cases, there were two calculi; in the second, there was but one, of a tolerable size, and which was, nevertheless, easily caught during the escape of urine between the blades of the forceps.

For the summary of the two following cases we are indebted to the kindness of Mr. W. P. Swain, house-surgeon to the hospital:—

Case 1.—John T——, aged fifty-two, a farmer, residing at Frittenden, was admitted on March 13th, 1858, with calculus in the bladder. About two years and a half ago he first noticed that his urine became high-coloured and thick. For some time he allowed this to go on without consulting a professional man. He then placed himself under the care of a physician, by whom he was treated up to August, 1857, for kidney disease; he then went to the Maidstone Infirmary, where he remained up to the time of his admission into this hospital. On admission he complained of great pain in the loins and epigastrium. His constant desire to pass urine, and the pain he suffered during the act, gave him no rest by day, and prevented his sleeping by night; in fact, the constant irritation was commencing to tell severely on his constitution.

March 14th.—Mr. Fergusson introduced a sound into the bladder, and discovered the presence of what he at the time stated might be more than one calculus. The patient, therefore, consented to undergo an operation for their removal.

15th.—He was brought into the operating theatre, and placed under the influence of chloroform. Mr. Fergusson then commenced to perform the lateral operation; and after extracting one stone from the bladder, he discovered that another remained, which he also removed with the forceps. The stones were about the size of horsechesnuts. A suppository, containing a quarter of a grain of acetate of morphia, was put up the rectum, and the patient was removed to bed. No bleeding of any moment occurred during the operation. In the night it was necessary to draw off the urine from the bladder, as none escaped by the wound. No further hæmorrhage occurred, and the patient passed a comfortable night.

16th.—The patient complained of slight pain over the region of the epigastrium, which was relieved by the application of hot flannels. He otherwise felt well. Pulse 104. The urine came freely through the wound.

17th.—The bowels operated freely; the pain over the epigastrium had ceased; and no further bad symptoms showed themselves.

24th.—The urine began to pass by the urethra, and the wound healed rapidly.

29th.—The patient was allowed to get up and move about.

April 22nd.—He was discharged. The wound had quite healed, and the patient's general health was very good.

CASE 2.—Henry Y——, aged sixty-four, was admitted on March 10th, 1858, with a calculus in the bladder. The patient is a native of Battersea, and states that up to three years ago he had always been a healthy man. About that period he noticed that his urine became bloody, and after walking any distance a copious discharge of blood came from the urethra. During the last year he has experienced severe cutting pain at the end of the penis, and has been forced to pass his urine very frequently, which he accomplished with great straining and pain. Occasionally the stream was suddenly arrested during micturition. The urine at the present time is perfectly clear, and not very high coloured.

On April 10th, the patient was brought into the operating theatre, and put under the influence of chloroform. Mr. Fergusson then proceeded to perform the usual lateral operation for lithotomy, and succeeded in extracting a large calculus from the bladder, composed of uric acid. The stone measured about three inches in its long diameter, an inch and a half in breadth, and about an inch and a half thick. Very little blood was lost during the operation. After the man was removed to bed, considerable oozing took place from the wound; this, however, was soon checked by the application of ice to the perinæum. About ten o'clock P.M., no urine having passed by the wound or urethra, and the man being in pain from over-distension of the bladder, Mr. Swain, the house-surgeon, introduced a No. 9 catheter, and drew off a considerable quantity of bloody urine A suppository of ten grains of soap pill with opium was put up the rectum. This gave the patient great relief, and he passed a comfortable night.

11th.—At nine A.M. the urine was again drawn off with a catheter. The patient was comfortable, experienced no pain in the perinæum or over the abdomen; pulse 120. Considerable ecchymosis appeared on the upper part of the perinæum, extending up on to the scrotum. This was caused by the size of the stone, which required considerable manipulation to extract. During the remainder of the day the urine flowed through the wound.

15th.—The patient had passed a good night, and complained of no pain; pulse 104. The bowels were relieved by an enema of castor oil and gruel.

19th.—A small quantity of urine passed by the urethra. The wound looked healthy, and the patient was in every respect doing well.

At the present date the patient is, as far as his general health is concerned, quite well. The urine passes entirely by the urethra, and the wound in the perinæum is fast healing up. He subsequently left the hospital quite well.

ST. BARTHOLOMEW'S HOSPITAL.

Two cases of Reducible Hernia successfully treated by Wützer's operation, with Rothmand's modification of his instrument.

(Under the care of Mr. LAWRENCE and Mr. COOTE.)

As we anticipated, the radical cure of reducible hernia is attracting considerable attention amongst surgeons, many of whom either employ modifications of Wützer's instrument, or invent others which they consider more simple and easy of application. Another form of instrument has been invented and successfully applied in several cases, by Dr. Riggs, of New York,* resembling in general appearance an ordinary trocar, of a curvilinear form, at the end of which is a bulb. This bulb is passed up an invaginated piece of skin, to the extremity of the inguinal canal, and a stylet with an eye is pushed through the intervening tissue; this is withdrawn with a thread in the eye, which subsequently pulls up a plug or foreign body, consisting of a fold of thick, twisted silk, or piece of sponge, and tied externally over the seat of puncture.

Lately, at St. Bartholomew's, two cases have been successfully treated by Wützer's operation, only with Rothmand's modification of his instrument, which consists in the addition of lateral pieces to the main-plug used by Wützer, thus making it more flat than round in form, and capable of being enlarged to any extent.

The first case was that of a lad sixteen years of age, Arthur P——, who had been ruptured for fifteen years with an oblique inguinal hernia, and who had worn a truss all that time. The internal ring was approximating somewhat towards the external opening. The operation was performed two weeks ago by Mr. Coote, when we saw the case, and a cure was completely effected. We may mention that the perforating rod of Rothmand's modification is made of silver, with a steel point, and is thus not so liable to rust.

The second instance is one under Mr. Lawrence's care, of a turner, fifty-four years of age, who suddenly ruptured himself eight years ago, from a slip on the pavement. He had never worn a truss. The hernia was a left inguinal one, of the left side, and was treated by the introduction of a medium-sized instrument of Rothmand's, by Mr. Lawrence, on the 25th of May. This has been removed, and so far as can be judged during the short time that has elapsed since the operation, we should say a good cure had been effected.

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* New York Journal of Medicine.

ST. MARY'S HOSPITAL.

Cases of Limited Idiopathic Peritonitis.

(Under the care of Dr. Handfield Jones.)

The point for notice in these cases is the occurrence of peritoneal or perienteric inflammation in a circumscribed extent, without any apparent exciting cause to determine it to that situation. In Cases 2 and 3, the cæcum appeared clearly to be the seat of the disease; in Case 1, we would rather locate it in the parietes of the ascending colon. Typhlitis, as Rokitansky terms it, is well known to be the result of the lodgment of fæcal residua in this part, and he ascribes it also to rheumatism of the muscular coat. The inflammation in such cases is, however, of the catarrhal kind (therefore of the mucous surface), and would probably be attended with diarrhœa; it is stated also to be subject to frequent relapses, and prone to become chronic. This account does not well fit the following cases, in which the external tunics of the intestine seem to have been chiefly involved. The good effect of leeching was exceedingly marked, and that of mercury scarcely less manifest. While it seems wholly impossible to explain how the withdrawal of blood from the cutaneous covering of the abdomen should affect an inflammation of a viscus isolated from it by a serous cavity, and receiving its blood from a very distant source, the fact remains certain, and we have but to receive it and think over it. Dr. Jones observes, that it seems no less than a positive proof that the nutritive processes of the superficial and deep-seated parts are in some way related, in such wise, that the morbid attraction of blood to the latter in a sthenic inflammation can be nullified by depletion of the vessels of the former. The distance from one part to the other "as the crow flies" is very short, the way round by the vascular system is very long. A diversion of the blood-current seems out of the question. We cannot but believe that some influence may be exercised by the adjacent superficial tissue on the deep-seated, by which its vital condition is modified. How else can we account for the beneficial effect of leeches to the temples in cerebral inflammation, or to the epigastrium in gastric catarrh, or to the thorax in pleurisy? We must assume in these cases an alteration of some motor of the blood-flow; the mere abstraction of a small quantity of blood would surely avail nothing to stop the abnormal afflux if the forces in action remained unaltered. The motor at fault in these cases cannot be the *vis à tergo* of the heart, it must be the *vis à fronte* of the tissues.

Case 1.—M. C——, female, aged twenty-six, single, was admitted Aug. 28th, 1857. Is subject to pain in the left side and to winter cough, but has never had any illness to confine her to bed that she can remember. Bowels and catamenia always regular. Rather spare, of middle size. Ten days ago a mustard plaster was applied to the right side for pain there, and medicine given. Pupils large, eyes prominent; bowels relaxed; complains of cold a great deal; skin very hot, perspires very much; pulse 80, thrilling; tongue moist and much furred; legs drawn up so as to relax the abdominal muscles. There is a great pain felt on pressure over the whole of the right iliac and lumbar regions of the abdomen; none on the left; the pain is not increased when the bowels act. To have six leeches to the seat of pain, and fomentations after; and ten grains of bicarbonate of potash, half a drachm of spirits of nitric ether, and an ounce of the mixture of acetate of ammonia, three times a day; with half a grain of opium, one grain of ipecacuanha, and one grain and a half of mercury with chalk, four times a day; simple diet, beef-tea, milk.

Aug. 30th.—Pain still felt over the right iliac region; pulse fifty-four, small; stools, solid, small; skin clammy. Apply eight leeches, and the medicine.

31st.—Is much better to-day; pain less, tenderness continues. Repeat six leeches, and to have one grain of calomel; three grains of mercury pill, half a grain of ipecacuanha powder, and half a grain of opium, four times a day.

Sept. 1st.—Very much better; pain almost entirely gone; can bear pressure better; pulse 64; bowels not open for three days. Continue medicine.

5th.—Tongue white; pulse 75; bowels not open; no pain on pressure anywhere. Two drachms of castor oil to-morrow. Omit the pill.

7th.—Feels better and free from pain; castor oil acted strongly. To have tincture of cinchona, one drachm; carbonate of ammonia, four grains; compound spirits of sulphuric ether, twenty minims; camphor mixture, one ounce; three times a day.

10th.—Free from pain, but weak.

Discharged soon after.

Case 2.—H. C——, aged thirty-four, ostler, admitted March 23rd, 1857, of stout make; had been ill three days with violent pain across the middle or lower part of the abdomen, which draws him double. It is brought on by walking; but is also very bad at night, except last night. Abdomen tender on sudden pressure; but he can bear steady pressure tolerably well. Some distension of abdomen, urine clear, high coloured; tongue coated; bowels open; pulse soft, open. To have calomel, two grains; opium, one grain, in the form of a pill, three times a day; castor oil, half an ounce, occasionally; bicarbonate of potass, one scruple; and camphor mixture, one ounce, four times a day; oil of turpentine to be used as a fomentation.

March 25th.—No attack of pain until this morning, when, on going down stairs, it seized him severely. Tongue very coated; no appetite; bowels open; gums swollen and red at edges, do not feel sore. There is a distinct prominence in the right iliac region, resonant, and highly tender on pressure. The rest of the abdomen is distended, but painless. Pulse 100. To apply eight leeches to the seat of pain. Repeat pill four times a day, and the mixture.

27th.—Much better; mouth decidedly sore; the prominence in the region of the cæcum much subsided and less tender; feels only some pricking and shooting across the hypogastrium; urine clear, of rather high colour; tongue less coated; pulse 87, soft, but with some jerk; less thirst. To take, mixture of acetate of ammonia, one ounce; spirit of nitric ether, half a drachm; nitrate of potass, five grains; Battley's solution, four minima, four times a day. Repeat pill every night. A blister to be applied over the coccygeal region.

30th.—Well enough yesterday to walk out a little; no pain; slept well last night; tongue clean. To have bicarbonate of potass, ten grains; infusion of calumba, one ounce, three times a day.

The patient took some cod-liver oil after this, and soon recovered. Seven years before, he had a similar attack, for which he was treated in the Middlesex Hospital.

Case 3.—Thos. M——, aged eighteen, smith, admitted Nov. 11th into the Great Northern Hospital. Had been ill fourteen days. He was first attacked with pain in the upper part of the abdomen, which shifted to the right iliac region, where it remains. On examination, there is found a degree of tumefaction and considerable tenderness in that part, so that he cannot endure pressure; no tenderness elsewhere. Bowels costive; appetite lost; thirst; urine as usual; skin cool; pulse weak, 96; tongue whitely coated. Has slight shivering occasionally. Abdomen and legs are covered with ichthyosis, which he has had since childhood. Six leeches gave immediate relief to the pain, and under calomel and opium short of salivation he was free from pain in three days, and recovered speedily.

Effects of Syphilis on the Internal Organs, especially the Liver.

(Under the care of Dr. Handfield Jones.)

We place the following short case on record, as a good practical illustration of syphilitic disease of the liver, of which several examples were brought before the Pathological Society during the past session by Dr. Wilks. The case possesses features of peculiar interest, because the disease was diagnosed during life, and readily yielded to proper treatment.

E. D——, aged twenty-seven, a married female, was admitted into the above hospital last December. She was a weakly person, but had no manifest disease at that time, except some dysæsthesia about the larynx, causing a sensation of choking.

Jan. 11th.—She complained of having a lump in the epigastrium, which was very tender. On examination a distinct tumour was found, about the size of a small walnut, in this situation; very distinctly felt when she sat up, but receding when she lay down. It appeared to be situated in the anterior border of the liver. There was pulmonary emphysema; the heart's pulsations were felt in the epigastrium, but no bruit was heard. Dr. Markham, who saw the patient some days later, took the same view as Dr. Jones did, that the tumour was situated in the anterior edge of the liver, and that it was probably of cancerous character. The patient took only a hydrocyanic acid mixture, and so all went on in the same way till Feb. 8th, when she first drew attention strongly to the circumstance of her throat being very sore. On inspection, ulceration was found of a syphilitic character, and she was put on the use of Plummer's pills and iodide of potassium. She improved immediately, and on March 11th, volunteered the remark, to Dr. Jones's great surprise, that she could feel very little of the "lump" in the epigastrium, neither could Dr. Jones on examination.

April 8th.—She was quite convalescent, and stated that she found "nothing of the lump." The throat was well. She then ceased attendance.

LONDON HOSPITAL.

Old standing Disease of the Knee-joint, with Contraction; Division of the Hamstrings, followed by extension; Cure.

(Under the care of Mr. Curling.)

The following cases illustrate very well the advantage of forcibly straightening contracted limbs under the influence of chloroform, and dividing tendons when necessary. The joint affected in each case was the knee; two of the patients were children, and one a young man eighteen years of age.

We give the last case first, the notes of which were taken by Mr. Birtwhistle. The disease in this patient commenced two years ago:—

James G——, a labourer, eighteen years of age, apparently of weak constitution and frame, entered the London Hospital as in-patient on the 16th of February. He was then suffering from strumous disease of the knee-joint, with contraction of the flexors of the leg. With reference to the past history of this case, he states that about two years ago when walking, he caught his foot against the ground, fell down, and sprained his knee. With the exception of a little stiffness, he did not at the time experience any pain or other inconvenience; but after the lapse of a week he suddenly became unable to walk, and was obliged to rest. His medical attendant applied a blister, and after a fortnight's confinement to bed he was sufficiently relieved to allow of his again resuming work, though the knee still remained somewhat swollen. For about two months he continued to labour without further annoyance; but at the expiration of that period he noticed that he was unable perfectly to extend the leg, which became gradually more and more contracted, so that he was again obliged to leave off working.

On February 16th, the date of his admission, the leg was so far flexed that merely the tip of the toe touched the ground, and the knee was somewhat enlarged. There was a slight amount of inflammation present, consequent on his moving to the hospital; this was soon allayed by warm fomentations, and on the 18th the camphorated mercurial ointment, with strapping bandage, and gutta-percha splint, were ordered.

On the 1st of March a blister was applied, and on the 12th a gutta-percha splint was used, the knee being first painted with tincture of iodine.

On the 19th, tenotomy of the hamstring tendons was performed by Mr. Curling, after which operation the leg was kept at perfect rest on a splint which had been previously moulded to it. In this state it remained for about a week, when an apparatus with rack-work movement, to enforce gradual extension, was applied. He was now allowed to leave his bed, and after using this splint for eighteen days the leg was perfectly straightened, in which position the apparatus was discontinued, and the limb was retained in straight position by means of a gutta-percha splint at the back of the knee, which was much reduced in size.

Discharged April 25th. He was able to walk with the aid of a stick, and to bear upon the limb. The knee was ordered to be supported simply by strapping, and a gutta-percha splint behind, to prevent a return of contraction.

The subject of the following case had suffered from some affection of his knee-joints since he was eighteen months old, but the contraction was confined to one knee. He is now quite well, and on the eve of discharge from the hospital. We avail ourselves of the notes of the case taken by Mr. Rutledge, the house-surgeon to the hospital:—

Charles G——, aged nine, a brewer's son, was admitted on the 20th of April, 1858. The father of the patient stated that his son had suffered since he was eighteen months old from some affection of the knee-joints. He had consulted several medical practitioners, without obtaining any relief. About three years ago, he was induced to bring the boy as an out-patient under the care of Mr. Ward. Both knees were enlarged and flexed. Mr. Ward applied Scott's dressing to the left knee, and placed the patient under a course of tonics. This treatment was followed by perfect recovery of the left knee-joint. For some unknown reason, the right knee-joint was not subjected to treatment.

Upon admission, the patient's right knee-joint was.. enlarged; the synovial membrane was thickened; the head of the tibia was considerably enlarged, the patient's friends thinking that an extra bone had been developed in the knee-joint; the tendons of the hamstring muscles were tense, flexing the knee almost to a right angle; the patient did not complain when limited movement occurred, and there were no symptoms indicating active disease, but the patient stated that upon extra exertion the knee became inflamed and painful. He was able to move about with the assistance of crutches.

April 29th.—Mr. Curling divided subcutaneously the tendons of the hamstring muscles, and then applied a gutta-percha splint, which had been accurately moulded to the deformity. The boy was directed to remain in bed.

May 6th.—Ferguson's splint, with rack-work adjustment, was fitted to the limb, and extension was commenced, which has been since continued, and on May 10th the limb was nearly straight. Extension is still kept up.

Strumous contracted Knee; Fracture of the Tibia; Cure of the Contraction by Straightening, after the Fracture had united.

The disease in this little girl came on after an attack of measles when she was four years of age, and at one time was very extensive. She was admitted for a fractured leg, which was first cured, and then the deformed knee straightened with the best results, as detailed in the subjoined notes by Mr. I. B. Kennedy.

Jane T——, aged eleven years, was admitted on the 2nd of April, 1858. The patient, who is evidently of the strumous diathesis, states that she had measles about seven years ago, and immediately afterwards pain and swelling ensued in the knee. After this had lasted some time, the limb began to contract. Her mother took her to the Orthopœdic Hospital in Hatton-garden, where she was received as an in-patient, and put upon liberal diet and tonics. Her knee was opened with a lancet three times, the first time under the influence of chloroform. It was first placed on a bent wooden splint, and was gradually straightened by a screw attached to the same. She says that before the splint was applied, her heel used to touch her back when she stood up. The first splint straightened it to a very considerable extent, and after a time this was removed, and an iron one substituted. Why this change was made cannot be ascertained. After some time, this was also removed, and a straighter iron one was used in its stead. She remained in hospital a year and a half, and was then discharged because she had an attack of fever. When she left the hospital, the strumous abscesses had closed, and the leg was almost straight. She, however, was allowed to bring the third splint out with her, which her father used to unscrew to a small extent daily.

The hospital surgeon (Mr. Chance) attended her at home for some two or three weeks. From this period, she had no more medical attendance until admitted into the London Hospital, on the 2nd of April, suffering from a fracture of the tibia of the once diseased leg. There were several deep scars, indicative of old wounds, about the knee—one much depressed, more than two inches in length, apparently consequent on a free incision.

The leg was placed in splints on the side, as it could not be slung on account of the flexed condition of the knee.

After about five weeks, these appliances were removed, the tibia being firmly united. On Monday, May 4th, a long thigh-splint, with a straight splint at the back of the knee, was ordered by Mr. Curling for the purpose of straightening the knee. On Thursday, the 7th, the leg was much straighter; and on Monday, the 11th, Mr. Curling commented on the vast improvement that had taken place, the limb being straight, and all contraction removed. A gutta-percha splint to the back of the knee was ordered, and the patient allowed to leave her bed.

LONDON HOSPITAL.

Congenital Extroversion of the Bladder in a Female Infant.

(Under the care of Mr. Curling.)

Of the many cases of this curious deformity, very few are seen to affect the female sex; the majority have been described as occurring in males. On the second of June, an infant, a month old, was brought to the London Hospital by its mother, and shown to Mr. Curling, with a deficiency in the lower part of the walls of the abdomen and the anterior wall of the bladder. The mother was not so desirous of having anything done to relieve the deformity as to ascertain the nature of the sex. This did not seem to be altogether a very easy matter, but on examination the nature of the deficiency in the genital organs seemed to be very different from what is usually met with in male children. Thus there was no penis at all; the prominence of the bladder, with its two ureters, was distinct enough. An opening was present in what appeared to be the mucous membrane of the anterior wall of the vagina, which might be either the meatus urinarius usually found in that situation, or the entrance of the uterus. Two smaller openings were present, one on either side of this, which must be either the seminal ducts or else the Fallopian tubes; they, however, seemed to complicate the diagnosis. There was the prominence in each groin, depending upon the separation of the bones of the pelvis, as is seen in male children, but there was no scrotum, nor testes. Now, of some seven instances which we have noticed, all in males, there was not the slightest difficulty experienced in distinguishing the sex, and we believe that this child may be pronounced a female, more particularly as a slight prominence on either side of the supposed vagina, to some extent represented the nymphæ. The mother had had the child registered as a female. As in almost every other case there was no distinct and separate umbilicus; its representative could be noticed at the upper part of the extroverted bladder. Rokitansky, in speaking of this deformity, says it is more particularly accompanied by a defect of the symphysis pubis—in the female sex, by absence of the anterior commissure of the labia and clitoris; in the male sex, by fissure of the urethra on the dorsal surface of the penis or epispadias.

In regard to the question of operation, although various measures have been devised to afford relief, such as diverting the channel of the ureters, as successfully practised by Mr. Simon, of St. Thomas's Hospital, still no surgeon will undertake to remedy a deformity, which is probably best dealt with by being left alone.

UNIVERSITY COLLEGE HOSPITAL.

Stone in the Bladder of a Female Child successfully removed by Lithotrity.

(Under the care of Mr. Erichsen.)

Mr. Coulson, in the fifth edition of his standard work on "Diseases of the Bladder," gives as one reason why women are less subject to stone than men, that they are more regular in their habits, and not addicted to those excesses which, as he has shown, by increasing the nitrogenous elements in the body, promote the deposit of uric acid. For the same reason females are little subject to gout. The shortness and dilatability of the urethra, its form and the absence of the prostate, are additional causes. Mr. South speaks of but two cases of stone in females in 146 cases operated upon at St. Thomas's Hospital. Of 704 calculi in the Norwich Collection, thirty-five were taken from females. Seventeen females were operated upon at the Hôtel Dieu, at Paris, in 284 instances extending from 1808 to 1830. From the various statistics which have been collected, the conclusion arrived at by Mr. Coulson is, that the proportion of females to males—at least those operated upon—is about 1 in 20.

In University College Hospital, up to 1855, but one case of stone in the female bladder had occurred; since that time four others have presented themselves. One of these was a little girl three and a half years of age, from whom a stone as large as a hazel-nut was removed by dilatation, without subsequent incontinence. In the same year another child, two and a half years of age, had a stone crushed in the bladder. She had an attack of pneumonia independent of the operation, and perfectly recovered. In November, also, of the year 1855, a married woman, aged twenty-six, was submitted to lithotomy, and a stone removed that weighed five ounces and three-quarters: this patient died. A fourth case came under observation a few days ago, the patient being a delicate, emaciated child of four years, the subject of stone since infancy. She was brought into the operating theatre on the 26th of May, and chloroform administered. The urethra had been previously dilated by a sponge tent, and readily admitted the blades of a pair of small polypus forceps, with which the stone was caught. But as the diameter appeared to indicate that the stone was as large as a walnut, it was crushed several times. It was quite soft, and composed of phosphates. Since the operation the child has passed the greater part of the *débris* of the stone, and in a short time will be completely rid of every particle of it.

The pupils at this hospital have thus had an opportunity of seeing calculi removed from the female bladder by the three methods usually recommended,—namely, dilatation, crushing, and lithotomy. Of these four cases, in one only was the calculus composed of uric acid; the other three being formed of the phosphates. When a stone is to be crushed, Mr. Erichsen finds the ordinary polypus forceps quite sufficient for the purpose in children. In adults, however, he uses a pair of large forceps, of a somewhat similar shape, contrived by Mr. Coxeter, the size of the closed beaks not exceeding that of the finger. When the blades are opened, one of them is found to possess a wedge on its internal aspect for splitting the calculi, and this wedge fits into a fenestrum on the opposite blade of the instrument.

ST. GEORGE'S HOSPITAL.

Congenital Hydrocele of the Neck.

(Under the care of Mr. Prescott Hewett.)

At this hospital two examples of this very rare affection were presented to the notice of the pupils on the 27th of May. The first was in an infant a month old, who was born with a cyst on the right side of the neck. It was the size of a rather large orange, was punctured by Mr. Prescott Hewett, and several ounces of fluid withdrawn, a little discoloured. These tumours may be either multilocular or unilocular (in the present instance it was the latter), and are commonly known as hydrocele of the neck, and are treated as such a disease is—namely, by drawing off the fluid, and afterwards injecting some fluid to produce irritation and its resulting cure; iodine will probably be used in this case. In 1839 Mr. Hewett dissected a specimen of this disease for Mr. Cæsar Hawkins. In that instance, the cyst, which extended up to the jaws, was multilocular.

The other example was in a somewhat older child, and had been already treated at the Children's Hospital, by Mr. Athol Johnson. This was treated by puncture, and a quantity of fluid drawn off, as in Mr. Hewett's case. It remained collapsed for several days, and then began to increase; it is now quite tense, and more solid than in the infant, because it is so very full, and is about the size of an orange.

Such cases as these are sometimes dangerous, as inflammation and sloughing may be produced; and as they lay over the course of the carotid artery, sloughing might be attended with hæmorrhage.

Mr. Hewett took this opportunity of referring to a case of the kind which first came under his notice some years ago, of a young lady with a cyst in this situation. Mr. Keate dissected the tumour out, but left a small bit of the cyst adherent to the subclavian artery. The wound healed up, and the patient remained well for several years. When fourteen or fifteen years of age, a tumour occupied the same situation, and she was taken to Edinburgh to a surgeon, who refused to meddle with it. He (Mr. Hewett) saw it a little later, and he also refused to do anything to it. He thought, however, it might be obliterated, and Mr. Keate saw the case with him. The tumour was punctured, and a quantity of rock-water was drawn off. It was evidently a remnant of the old cyst, which he treated by passing two threads through it, to act as setons. Four days after extensive suppuration of the whole cavity took place; she had shivering and irritative fever. He opened the entire cyst, right down to the collar-bone, cutting through the great mass of the tumour. A good deal of pus was evacuated. She got up and went about, and a cough commenced. One day, on her return home after a ride, she became faint, and vomited up a quantity of fœtid matter, which must have come either from the lung itself, or was a separate deposit. At any rate, Mr. Hewett stated, she had remained perfectly well ever since, and has quite recovered.

This gives a good idea of what may sometimes be encountered in the treatment of this uncommon affection, which sometimes may attain to so large a size as to interfere with deglutition and respiration. Its general seat, as has been accurately described by Monnoir and Philips, is the posterior inferior triangle of the neck, where it forms a somewhat bladder-like tumour, filled with various kinds of fluid, of a yellow or chocolate colour and serous character, but mostly resembling rock-water as pointed out by Mr. Hewett. Some surgeons prefer to treat these cases by a seton after permanently tapping the cyst.

GUY'S HOSPITAL.

Case of Chondro-Osteoid Growth amongst the Muscles in the Posterior Region of the Thigh; Removal; Recovery from the Operation.

(Under the care of Mr. Birkett.)

On February 2nd a patient consulted Mr. Birkett on account of a tumour in the posterior part of the thigh. She was thirty-two years old, a very healthy, strong countrywoman, the mother of two children, and had resided, in comfortable circumstances, for the last few years in London. The tumour was situated in the external and posterior region of the inferior third of the left thigh. It was as hard as a stone, and did not yield to the strongest pressure, and which pressure caused no sensation in the lump. The growth seemed to be distinctly circumscribed when a careful examination of the surrounding tissues was made by taking advantage of the movements of the knee-joint. With the exception of the short head of the biceps femoris muscle, all the muscles of the posterior femoral region could be clearly recognised; this portion of the biceps appearing to be closely united to, if not identified with, the growth. In point of fact, the relations of the tumour might be well expressed by stating that it occupied the site of the short head of this muscle. The tumour projected in low relief with the neighbouring parts, and its appearance might be aptly compared with the fulness which would be produced if one imagined a largely-developed short head of the biceps in a violent state of contraction. A few small cutaneous veins over the region were varicose, otherwise the integuments were healthy. The popliteal vessels and nerves did not appear to be in any way influenced by the growth.

The woman stated that, about October, 1855, or rather more than two years since, she accidentally discovered a small hard "kernel," about two inches in diameter, rolling under the skin at the outer and back part of the left thigh. From that date a steady increase was observed, attended with slight aching and shooting sensations. She gave no history of hereditary predisposition to the development of new growths. Believing that the growth might be with facility removed, and influenced by the experience of having witnessed the baneful effects of such growths being allowed to remain amongst the muscles of an extremity, Mr. Birkett explained to her that it must be removed by an operation.

The patient was admitted into Guy's Hospital on Feb. 9th, 1858; and after another careful examination of the tumour, its relations were with accuracy defined. When grasping the mass, at the moment when the posterior femoral muscles and fascia were relaxed by inaction and flexion of the knee, the growth might be moved freely from side to side, upwards and downwards. This afforded presumptive evidence that, although it was so hard to the touch, it was not *now* attached to the femur—not exostosis of that bone. When the muscles were in action, the knee extended, and the posterior fascia tense, the tumour was fixed and immovable. From this fact, the conclusion was arrived at that it was seated within the fascial envelope, and that it probably was developed in relation with the fibrous tissues of the region. The close union between it and the short head of the biceps was indicated by the fact, that while the long head of the muscle and the tendon formed from both heads were well defined, the muscular fibres of the first could not be discovered, but were imperceptibly lost either in or around the new growth.

On February 16th, the growth was removed by making a vertical incision through the integuments over the centre of the tumour about five inches long, and in the same direction the fascia of the thigh and its envelope were incised. After careful incisions upon the surfaces of the growth, and separating it from its attachments with the finger and handle of the scalpel, it was enucleated from the surrounding tissues. It was so intimately united with the fibres of the short head of the biceps femoris that many of the fibres of this portion of the muscle were divided, and from the pressure exerted upon them by the tumour, they were pale, atrophied, and had lost the power of contraction. The growth extended deeply into the thigh to the external linea aspera, and was very firmly united with the fascia at this point. Indeed, if there was any one particular structure with which it could be associated more than another, in the light of a source or origin from which it grew, it might be this fibrous tissue. After the removal of the growth, the external attachment of the posterior femoral fascia was wanting, and the origin of the external vastus muscle of the thigh from the femur became distinctly exposed to view. A very trifling amount of bleeding attended the operation, and all there was came from small vessels. The margins of the wound were approximated with plaster, and a piece of lint laid over it.

The tumour measured in its two axes, longitudinal and transverse, four inches and a half by three. It was, therefore, of oval figure, its surfaces just slightly irregular from small elevations in low relief, and its colour was of a greyish-pearl tint. It was so hard in the centre that a saw was required to make a section. About two-thirds of the central part of the mass consisted of bone, densely compact in some parts, somewhat cancellated in others. The remainder was composed of cartilage; and the union of these two tissues was not well defined. A delicate envelope of fibre tissue surrounded the whole mass.

Clinical Records.

NEUROMA OF THE POSTERIOR TIBIAL NERVE; AMPUTATION OF THE FOOT.

An Irish boy, ——— years of age, was recently admitted into St. Bartholomew's Hospital, with a nodulated swelling of the sole of his right foot. It had commenced twelve months ago, and now involved the greater part of the sole in a series of nodules, associated with general swelling, which had lately extended to the inner margin of the sole. He had been three weeks in hospital, when Mr. Lawrence, after consultation with his colleagues, determined to remove the foot above the ankle-joint. This joint was quite unaffected, and so were the other parts of the foot. The growth of the tumour had been somewhat rapid of late, and the surfaces of the nodules were discoloured; and so far as could be judged by these, together with the history, it looked as if it were medullary sarcoma. The leg was amputated by Mr. Lawrence on the 22nd of May, and the foot was subsequently carefully dissected, when a true neuroma was found, the size of a walnut, on the posterior tibial nerve, the intimate fibrils of which surrounded the tumour, or, in other words, the tumour was developed from one or more fibres of that nerve, and caused the others to be expanded over it, and separated from one another as the tumour increased in size. The affected nerve gradually got lost in the structures of the sole of the foot, which had become completely degenerated in character, scarcely any of the natural tissues, excepting, perhaps, one or two small muscles, being recognisable. The lad, however, is doing very well, and will make a good recovery.

A case in some respects similar to this was in the same hospital a few weeks back, under Mr. Stanley's care, of a young woman, who has a pulsatory tumour in the sole of her foot; it was diagnosed a pulsating tumour, but turned out to be a neuroma of the internal plantar nerve underneath the plantar artery.

These cases are of great interest, especially from the difficulty in arriving at a correct diagnosis before operative proceedings.

FOLLICULAR DISEASE OF THE THROAT IN CHRONIC BRONCHITIS.

W. C. A——, aged twenty-six, a bricklayer, was admitted into the Consumption Hospital, Bromptom, under the care of Dr. Edward Smith. He complained of a cough and dyspnœa, with a tight feeling at the bottom of the trachea: all increased with cold, and quite absent in the summer time. His mother had asthma; and he has had his present complaint every winter since childhood. He smokes a little—half an ounce a week —not the refuse, nor with a dirty pipe. His throat exhibits all around the pharynx a mass of enlarged follicles as high up and low down as can be seen. The epiglottis can be easily exposed, and the application of the solution of nitrate of silver shows that the parts are not very irritable; the whole surface is frothy with adherent semi-transparent mucus; the colour is not deepened, except upon the follicles, but the mucous membrane is suffused. On examination of the chest there are all the signs of old bronchitis—viz., the vesicular sounds lessened and marked by mucous and sibilant râles, with loud and prolonged expiration and deficient resonance in the clavicles. He can take butter, suet, and milk; but fat flesh he always dislikes.

On January 17th, the pharynx was well brushed with a strong solution of nitrate of silver, and an alkaline cod-oil mixture directed to be taken slowly thrice a day; he also took one-sixteenth of a grain of morphia twice in the night. He was directed to swallow a little suet-and-milk many times in the day.

Feb. 3rd.—He reported himself improved.

10th.—He was still better; but on examination of the throat the follicular disease and general desquamation continued.

This was a case in which the diseased state of the epithelial covering of the mucous membrane was very confirmed and extensive, and one consequently particularly liable to the ill effects of wintry weather. He could not be induced to entirely discontinue the smoking.

BILIOUS REMITTENT FEVER.

That well-marked examples of this form of fever are occasionally met with, even in the metropolis, we think there cannot be any reasonable doubt. Of course, in tropical countries, this disease is not only severe in its character, but becomes extremely fatal. In temperate latitudes however, the same fever will be comparatively mild, but will at the same time possess most of the leading features. The essential cause of bilious remittent fever is probably the miasma which usually proceeds from a marshy district. This is clearly seen sometimes in its attacking a whole ship's crew when the vessel approaches a miasmatic coast. Dr. Willshire lately attracted our attention to the case of a young man in the Charing-cross Hospital, who was evidently labouring under this fever. It appeared that he had been previously admitted as a patient with an ephemeral fever, from which he had quite recovered and left the hospital. He went down to Sheerness, and during, we believe, some irregularities, was exposed to miasmatic influence, and returned to the hospital with a bilious gastric remittent fever. There was a distinct remission in the character of the fever, and when admitted he had hæmorrhage from the nose; there was also a yellowish tinge of the skin. The disease was certainly present in its mildest form, and could not be confounded with gastro-duodenitis connected with functional disturbance of the liver, as it sometimes is, because of the distinct paroxysmal form of the remission. There was, besides, uneasiness in the epigastrium, and slight headache. Under treatment, recovery was ensuing, as is generally the case in the mildest forms of the complaint, although the severest will yield to prompt and proper treatment. On this point, Dr. Wood of Philadelphia has remarked: "There is, perhaps, no disease in which the resources of our profession are more happily displayed than in the worst forms of bilious fever. Fearfully fatal under neglect or mismanagement, they may, in the great majority of cases, be conducted by proper treatment to a favourable issue."

CONGENITAL ABSENCE OF THE RADIUS AND ITS MUSCLES.

Very curious cases come under notice occasionally, illustrating the freaks of Nature in the deficiency of parts. When they are uncommon, we generally bring them under the notice of our readers. On the 2nd of June, a child of two years was brought to Mr. Erichsen, at University College, whose left hand was twisted inwards, and quite loose at the wrist as if paralysed. The apparent thumb was rudimentary, and hung by a piece of skin. On minute examination, however, it was discovered that the entire radius was absent, as well as, so far as could be made out, its proper muscles. There was a wrist-joint; but the true radio-carpal joint was not perfect, nor was there any metacarpal bone of the thumb. The true thumb was, therefore, deficient, and the rudimentary finger in its place was evidently not a thumb, but probably a second index-finger. This appendage, being in the way, was removed by Mr. Erichsen.

What is peculiarly interesting in this case is, that there is not only an absence of a bone, such as the radius, of itself very rare, but that its proper muscles should be deficient. We could understand such a phenomenon better were a whole limb gone in utero; but why Nature should pick out a particular bone and its muscles in the centre of a limb for deficiency, is a problem that is difficult to solve.

CHLORATE OF POTASH LOTION IN CANCEROUS ULCERS.

At the Royal Free Hospital, Mr. Weeden Cooke is in the habit of employing a lotion to heal up various kinds of ulcers which is worthy of attention. It consists of half an ounce of the chlorate of potash, forty minims of hydrochloric acid, two drachms of the sedative liquor of opium, and a pint of water (twenty ounces). This has been lately used in a very severe case of ulcerated cancer of the lower lip, left side of the face, and left half of the upper lip, in a man aged forty-six, the subject of it these last five years, who had formerly undergone an operation with but temporary benefit, although the disease in him is not hereditary, and who was admitted with this cancer in a horribly foul, swollen condition. When we saw the patient on the last occasion (June 1st), we observed that his general health had much improved by a course of internal medicine of bark and hydrochloric acid, and the lotion had converted a malignant sore into a healthy granulating ulcer, of a clean pink colour, with a disposition to heal up at the margins. The tendency to bleed, which was always present before, had now completely ceased; and we hope that a large portion of this ulcer may eventually cicatrize under the plan of treatment employed.

TUMOURS AT THE SEAT OF INSERTION OF THE SARTORIUS MUSCLE.

The insertion of the sartorius muscle takes place by an aponeurotic expansion into the inner tuberosity of the tibia. This muscle is the longest in the body, and as its use, besides being an abductor and an elevator, is to cross the legs over each other, as tailors sit with them, it accounts for the name. Underneath the expansion of the tendon of insertion of this muscle most pressure exists when the legs are placed in the position just referred to, and will account for the presence of a bursa in this situation. An example of the kind was submitted to treatment by Mr. Fergusson, at King's College Hospital, on the 29th of May, in an elderly man. The tumour in this peculiar situation was the size of a small flattened orange; but as it would have been a matter of some difficulty and danger to dissect it out in this situation,—danger from the risk of inflammation—a seton was passed through it, and a puncture let out all the serum it contained, which was sanguinolent. Its cure is a question of time; but the man is at present going on well.

At Guy's Hospital, on the 1st of June, Mr. Cock removed a tumour, the size of a walnut, situated over the insertion of the sartorius muscle, of an elderly woman, who had had the growth for fourteen years, commencing at first in the shape of a small kernel. She had recently struck the tumour by accident, which caused violent inflammation not only in it, but in the surrounding skin. This having subsided, permitted of removal. A section of the growth showed it to be fibrous in structure, but infiltrated with blood, which might have led to degeneration of a malignant character. The result of the operation is at present satisfactory.

TAPPING IN HYDROCEPHALUS.

Some weeks back, a case of congenital, but now chronic, hydrocephalus, in a young child, was treated by puncture on two occasions by Mr. Lawrence, at St. Bartholomew's Hospital. The enlargement of the head had increased somewhat within a few weeks, and the expansion of the skull was by no means uniform. The child remained in a drowsy and semi-comatose condition, scarcely taking notice of anything, and the symptoms were of an urgent character. The mother consented with some reluctance to the puncture of the skull. A very fine trocar and canula were introduced into the coronal suture, an inch from the middle line, and seven or eight ounces of a clear, pale fluid were withdrawn. This gave immediate and marked relief, and produced indications of liveliness; at the same time the skull did not seem so large. Four days afterwards, Mr. Lawrence again punctured the head, not in the same situation, but at the posterior part, and removing about ten ounces altogether. A very little hæmorrhage ensued, but the head was not compressed by long strips of adhesive plaster, as was practised on the first occasion. Four days afterwards, when brought to the hospital, the child's head had not enlarged any further, and it was said to be more restless than drowsy. Ten days later, the child's health was found to have improved, it being more lively, and the head had not enlarged. With the above treatment was subjoined small nightly doses of mercury with chalk.

Some weeks had elapsed, when Mr. Chippendale, Mr. Lawrence's house-surgeon, ascertained at the mother's residence that the child had died, apparently from inanition, that the head had not increased in size, and it had had no convulsions. The operation here, then, so far as could be judged, did service for a time, and possibly had the child been carefully looked to, it might have lived much longer, if not altogether recovered.

EPULIS OF THE GUMS.

A simple epulis springing from the gum, generally commencing between two of the teeth, may not seem a matter at first sight of any great importance. It can be removed by the knife; the wound will heal up, and the patient supposed safe from any further trouble. Unfortunately, however, this little tumour, which may be fibrous;

or fibro-plastic, or perhaps primarily simply cellular, does return, and, if not completely eradicated, will actually give rise to so much mischief as to require the actual removal of a portion of the jaw-bone, whose alveolus has become affected. This we have witnessed several times at different hospitals.

On the 27th of May, a healthy-looking young woman was brought into the operating theatre of St. George's Hospital to have a small and apparently insignificant epulis, scarcely the size of a large pea, removed from between the two upper middle incisors, being attached to the gum in that situation, and extending between them. This was very carefully performed by Mr. Tatum without giving chloroform to the patient, and she was sent back to her ward. This operation, as that gentleman remarked, was the second he had performed within a short time in the same situation in this patient, and he had made up his mind, in addition to the removal, to destroy the surface or base of this little growth with some powerful caustic, which was subsequently done; for however unimportant this malady may appear, it is utterly impossible to say it will not return, and finally affect the alveolus. As a rule, the tumour is indolent and painless in its growth; but its early removal should be invariably attempted, not only as holding out a chance of permanent cure, but to prevent its increase, and sometimes, as we have witnessed, its becoming the seat of offensive ulceration. We shall say nothing on this occasion about the operation for the removal of a portion of the jaw, as the disease in Mr. Tatum's patient had not gone so far as to require such a measure.

CANCEROUS BREASTS.

At one period, the removal of a cancerous breast was a very rare occurrence, and was looked upon as an operation of considerable magnitude. Now, however, it is by no means seldom to be witnessed, for scarcely a week passes without our observing one or more breasts being taken away. All these it would be quite impossible to recount; but we will just refer to a few of the more interesting and remarkable.

On the 12th of May, Mr. Erichsen removed the breast of a woman, aged forty, whose general health was good, and in whom the disease in the breast had existed only ten months. It was of the atrophic form of cancer. The breast seemed to have wasted away. We see many cases of this form of cancer at the Cancer Hospital, which remain stationary even for years without inconvenience to the patient. In Mr. Erichsen's case the skin was involved to some extent, which was, as he said, the only objection to the operation. It was freely and widely taken away, with the whole of the gland. It is a form generally which does not recur very rapidly. The patient is going on very well.

At the Samaritan Free Hospital, a breast was removed by Dr. Routh, on the 19th day of May, from a woman forty-two years of age, a domestic, in whom the disease was a mixture of the cystic and scirrhous. She had been married nineteen years, and had one child three years after marriage. A tumour was noticed whilst suckling this child, which was brought on by rough usage of the breast. It remained the size of a marble for some years, until four years ago there was some pain in it, when it commenced to increase, and lately the pain was very severe. The wound united by adhesion; and she has made a quick convalescence.

Another case, which we will now merely just mention, is one under Mr. Henry Thompson's care, at the Marylebone Infirmary, of an old woman, seventy-three years of age, with scirrhus of the breast. It was removed on the 24th of May; and the patient, although so old, is recovering rapidly from the operation.

VENOUS TUMOUR OVER THE ANKLE OF AN ADULT.

We have had occasion to remark before, that nævi and congenital vascular growths are rarely met with in adults, because it is almost an invariable rule to submit them when seen to early treatment. This will explain why so many infants at the present day are to be seen undergoing strangulation of mothers' marks in our various public institutions. Many years ago, perhaps the same attention was not paid to early obliteration as now-a-days, and hence we see examples of what were once simple nævi in infancy now become prominent vascular growths in adults. Some months back, we noticed a case of aneurism by anastomosis on the ear of a young man at St. George's Hospital, which was submitted to treatment by Mr. Hewett; it had been a simple nævus in infancy.

On the 20th of May, another case in the same hospital came under notice; it was that of a healthy young woman, aged about twenty-five years, with a prominent venous swelling over the anterior part of the left ankle, running on to the dorsum of the foot. The skin was discoloured from the large mass of veins, which felt like a sponge on being grasped with the hand. This commenced as a simple congenital nævus, which had slowly enlarged in the course of years, but was in a situation more amenable to treatment than if on the head. Mr. Hewett passed four large pins beneath the base of the tumour, and applied twisted sutures, in a manner similar to the plan adopted by Mr. Erichsen for varicose veins. This had the effect of producing both pressure and inflammation, the last by the pouring out of some adhesive lymph, as was remarked, and in the course of a little while, complete obliteration of the tumour.

MALIGNANT GROWTH DEVELOPED WITHIN THE WALLS OF THE ABDOMEN.

Abdominal tumours at all times attract the interest of both the physician and the surgeon, and the skill and acumen of the former are often taxed to the utmost in forming a correct diagnosis when the tumour is internal as to its seat. When external to the cavity of the abdomen, and developed in the tissues subjacent to the skin, the surgeon more immediately pronounces an opinion, for the case most properly belongs to him.

A few weeks ago an apparently healthy man, of an education and position superior to the class of patients usually met with in our hospitals, was admitted into St. Bartholomew's Hospital, with a tumour the size of the two fists situated in the right iliac region of the abdomen. It was prominent, somewhat elongated from side to side, was adherent to the skin rather extensively, and which seemed to be involved in the disease, and had been growing but eight months in all, not at any time being painful. It was removed by Mr. Coote, who took away a large portion of the affected skin with it. This left an extensive raw surface to heal up by granulation, about ten inches long and three or four wide; but when we saw it on the 22nd it looked very healthy, and, so far as can be judged at present, will heal up by contraction of surrounding tissues. The patient's general health was good, and he was taking good nourishment, with wine, &c. The tumour, on being examined, was discovered to be well-marked medullary cancer, which was anticipated, from the rapidity of its growth.

DESTRUCTION OF THE ANKLE BY STRUMOUS DISEASE.

A VERY severe case of diseased ankle was submitted to an amputation at St. George's Hospital, on the 20th instant, by Mr. Prescott Hewett, which was associated with very extensive swelling of the foot and lower part of the leg. The patient was a pale, delicate, strumous young man, who had had disease of his foot, for about twelve months, implicating at first the metatarsal bones. This resisted treatment, and progressed to such an extent that life became endangered. The leg was therefore taken off at its upper third by the circular operation, Mr. Hewett using a catline knife throughout. The ankle and lower part of the leg were, as suspected, much diseased; and in laying open the entire foot and ankle, all the articulating surfaces of the bones were found to be ulcerated, and surrounded with quantities of pulpy and gelatinous material, so indicative of struma. The bones were also so soft that they could be cut with a common scalpel. At first sight the foot looked as if affected with malignant disease, so peculiarly prominent was the swelling. Although feeble, we learn that he has been going on well since the operation.

A little while back we saw another case, of a boy of fifteen years, with disease of the foot, at Guy's Hospital; but as it had not extended beyond the metatarsal bones, Mr. Cock performed Chopart's operation with good results. The disease in this case had existed for some years.

Medical Annotations.

"Ne quid nimis."

A MONUMENT TO JENNER.

SURELY there is no human failing more common or ridiculous than blind self-complacency. We have had lately a notable instance of it. After long years a bronze statue has been erected to the memory of Jenner, the greatest benefactor of mankind whom the century has produced. This great event has been followed and accompanied by the most complacent and absurd self-laudation on the part of all concerned. There has been nothing but "booing" and speechifying; and thanks and praises have been awarded with indiscriminate profuseness. We have all gone through antics of admiration at the liberality and the energy which subscribed, paid for, and erected a statue to the investigator of cow-pox by the side of kings and military heroes. It were as well that a wholesome truth or two should be spoken. The statue does honour to the few men who have been at the pains and the risk of its erection. It does honour to Mr. Calder Marshall, whose veneration for Jenner led him to execute the model of the statue, and suggested the raising of a fund, and whose generous enthusiasm has supported him through this labour under much discouragement. The appreciative few may claim credit for their work if they are disposed; they are the last to seek as we would be to deny it. But the statue cries shame on the niggard apathy of the people of England, whose contributions amount to less than one-third of the subscription; shame that foreign states have so easily surpassed them in respect to their own son; shame that the scanty list of pounds does not even repay the labour of the artist whose love and skill have wrought this monument; shame that years have passed ere one poor bronze statue has with difficulty found a maker and a site after many failures to attain the like result; shame, too, on the ladies of England, whose prized and seamless beauty this man may claim as a part of his gift, and who have forgotten to offer the smallest of their coins in his honour. Such a statue should have been erected by an universal suffrage. It is the poor especially who have cause to bless the saviour of their health and life in Jenner. Every poor man should be taught to associate that idea with his name. This indebtedness to Jenner should be pictured to him, and gratitude might have found a vent in the slightest offering towards his fame. Such a man as Jenner should have a monument founded by the pennies of the poor, as well as the pounds of the rich. It were to their own interest as well as to their honour. It is to the interest of the poor man that he should be now and again brought face to face with the higher principles and grander feelings of humanity. It is well for his mind and for his soul that he should feel within himself the capacity to appreciate and the power to reward those large benefits which science confers upon him in common with all other human beings. No man should pass that venerable form, seated in its academic chair, but should be able to say to himself, "There is my benefactor; this, too, is a part of my acknowledgment to him: I have a share in the gratitude as in the profit." This is a possible consummation; it is a just one, and therefore it should be attained.

We trust statues of Jenner may one day be multiplied until every large town has one, and every poor man has given his penny towards its erection. Meantime, Jenner has that proud monument which Wren boasted in a narrower limit, "Si monumentum requiris, circumspice." His glory shines in every fresh and healthy face; his triumphs are enrolled in every family Bible; his monument is not in one cathedral, but in every home. Such a man has little need, perhaps, of storied urn, or sculptured bust, to perpetuate his fame, for every day adds a stone to the temple in which his immortal discovery is self-enshrined. This day we bring to it one such as time cannot injure, nor calumny blacken. We find the data in an admirable book recently published by Professor Guadet, chief director of instruction at the Imperial Hospital for the Blind at Paris, which treats upon persons afflicted with blindness. It is stated there that half of the children sent to the Institution before the discovery of the immortal Jenner, had lost their sight as a sequence of small-pox. There were formerly more than 30,000 blind in France, and now, after Jenner's discovery, there are now not more than 25,000. The five thousand are the monuments of his glory; the glorious living beauty of their visual orbs excels the art of the sculptor as greatly as his merits transcend those sculptured words which are, after all, mere dead forms—dry bones that want the living force of spoken praise. We may say of this what Edrisi said of a less noble monument, "Nulla sanè huic columna similis."

DR. BROWN-SÉQUARD.

There is no abstraction so pure as to be wholly apart from other less immaterial influences. Not even science is free from the impress of national feeling. Nor has it suffered by the sympathy and support which have been thus evoked. Valuable advances in the highest branches of science owe their origin to a mixed feeling of this kind. In this country, where a consistent system of nervous physiology was first given to the world—the birthplace of Marshall Hall and Bell,—we may be excused if we feel something more than scientific interest in the researches of a physiologist who has examined their theories, repeated their observations, and sought successfully to advance that branch of physiology in which they so greatly laboured. Dr. Brown-Séquard claims kin with us by his descent. And it is very honourable to the council of the College of Surgeons that they have readily opened to him the doors of their theatre for the exposition of his views. His highest claims were based upon the importance and originality of his opinions, and the singular ingenuity of the experimental basis upon which they are founded. There are yet other grounds of sympathy which have won for him a reception of extreme and deserved cordiality. But warm as this reception has been, and distinguished as are the audiences which his lectures have brought together, yet their benefit has been confined to a select few. It is told of a distinguished judge, to whom a foreigner complained of the scanty dimensions of his court, that he replied, "I sit every day in the papers." We have felt it our duty, by the like means, to bring Dr. Brown-Séquard in face of a larger audience than the theatre of the College of Surgeons could afford to him. We have thought that views so important and experiments so striking should be brought within the cognizance of those thousands of our profession to whom, from occupation, locality, or a thousand other reasons, they would else have been inaccessible. We look forward to the early publication of these lectures, under the immediate personal revision of their author, and with the aid of all necessary illustrations, with the belief that they will constitute a bright era in the history of physiology in this country.

THE CONSCIENCE OF A BOARD OF HEALTH.

The Local Board of Health at Worthing have cut this week a sorry figure in the courts of justice. A Mr. Friend was employed by that body to drain the town. Five members of the board, whose duty it was to enter into the contract by deed, had personally approved it, and expressed their assent to the deed, but had omitted to fulfil the provisions of the statute by signing it and affixing their seals. It was admitted that the work had been done, and by their order; but payment was refused on the ground that the contract was not entered into according to the form given by the statute. The obvious scandal of this palpable chicanery startled even the veteran Lord Chief Justice, who justly characterized this "as a scandalous and dirty defence." Other contractors with local boards of health, whether for purely medical or mechanical services, will do well to remember the decision which the judges were compelled to enunciate on this occasion, since Mr. Justice Willis significantly remarked that this was certainly not the first instance of fraud proceeding from the same source which had come under his observation. It is really difficult to understand how five men can think themselves justified in perpetrating such an act as was exposed in this case, for which any one of them might be ejected from society if he had enacted it on his sole responsibility. For ourselves, we cannot consent to recognise such an immunity, and we cannot regard any one of a roguish quincunx as more honourable than if he had been a solitary evil-doer. We identify each man with the act of the whole five, and we hold that the guilt, so far from being divided by the number of participators, is, in sober truth, just multiplied to that extent.

A SURGEON'S REWARD.

The Westminster Courts witnessed on the 9th instant an attempt, on the part of the executors of an old man named William Butcher, who died at the age of eighty, in January, 1857, at Wickham Market, in Suffolk, to injure a general practitioner, Mr. Cochrane, who with great skill and success had crushed a stone in the bladder of the deceased by successive operations, and attended him for some months afterwards. Mr. Cochrane received a fee of £100 from Mr. Butcher in the presence of his housekeeper, and it was accompanied with well-deserved expressions of thanks for kindness and great attention. This sum the executors have attempted now, to their great discredit, to recover by process of law, on a plea that it was excessive in amount. The case broke down in the most complete manner, and the jury intimated that they were all of one mind, and did not desire to trouble the counsel for speeches. They found a verdict for Mr. Cochrane without retiring, and at the same time expressed their pleasure at the very satisfactory manner in which he had given his evidence. We have never seen a more frivolous or vexatious proceeding than that of the executors in this instance. The plea of excessive charge is absurd and unfounded. It is well known that a surgeon in the city, celebrated for his skill in lithotrity, has received more than one fee of 300 and 200 guineas for lithotrity, in cases where physicians of eminence have conducted the attendance at a distinct cost. M. Civiale of Paris never accepts less than 3000 francs for the operation, and often receives 4000 francs. It is very honourable to Mr. Cochrane that he should have conducted to a successful issue an operative proceeding which calls for unusual tact and experience; and he may be congratulated upon his professional skill in this affair, no less than upon the manly independence which he showed throughout.

THE APOLOGISTS FOR ARMY MORTALITY.

There are many ways in which the exposure of shortcomings may be met. They may be dealt with in a spirit of candour and humility. Their existence may be freely confessed, and the remedies thoughtfully discussed; they may be bonneted with open denial, or may be evaded by ingenious attempts at apology, explanation, and other means which are used to effect a sort of verbal whitewash. We see with some regret occasional attempts to meet, after the latter fashion, the startling revelations of the Army Sanitary Commission as so the swift and silent decay which eats away our armies. We are not surprised to find the anarchs of the Horse-Guards raising an empty clamour of self-defence; and we are content to leave their self love intact, by allowing their words to *lie* unnoticed so long as they satisfy the claims of humanity by quietly introducing those reforms which they declare to be unnecessary, and to have been in vogue long ago. But we cannot see without pain that some of the elder medical officers of the army are joining in the same cry. They appear to labour under a false impression that they are to be held personally accountable for a mortality arising from circumstances over which they had no control. They palliate the evil, as though personally interested in making it seem less; and offer lame apologies for errors in which they are really unconcerned. Never was the "laudator temporis acti" worse employed than in this cause; and we earnestly counsel a prudent silence.

HOSPITAL PROPERTY IN FRANCE.

The political necessities of imperial despotism are weighing heavily upon France. A threatening hand is now stretched forth over that which was held to be sacred from the grasp of rapacity, and sheltered from the designs of the unscrupulous. If any compact be especially binding, it is that which has been solemnly made by men long since dead in behalf of men now suffering. If any trust be beyond others inviolable, it is that by which we administer for the benefit of the distressed the charitable bequests of those who have sought, by such devotion of their worldly wealth, to serve their Maker's cause after their departure from earth, to deserve his favour, and perhaps to expiate their faults. There is no property more sacred than that which is vested for the service of those who are destitute. This is the wealth of the penniless; the heirloom of the pauper; the common possession of the sick, the suffering, and the diseased. We are willing, therefore, to set it down to the indiscreet zeal or the ignorant thoughtlessness of the Minister of the Interior for France, General Espinasse, that he has issued a circular to the prefects, commanding them to use "their influence, and if need be, their authority," to bring the directors of hospitals and charitable institutions to effect the sale of the land and house property with which those establishments may be endowed, and to invest the proceeds in the public funds. Until this be done, no further "subventions" will be granted. The pretext is, that investments so made are considerably more profitable than landed property. There is the strongest reason to doubt this assertion. The value of landed and house property has risen notably in Paris and elsewhere in France; it has never been higher than it is now, and it is likely yet further to advance in value. We know that several of the Paris charities are in possession of larger incomes than formerly solely by virtue of this increase in the value of their property, which is still progressing. We are not surprised, therefore, to see, in the report of *The Times* correspondent, that the measure is regarded with apprehension and disgust, and that people contend that it is an arbitrary and unjust violation of the wishes and intentions of the dead, which is calculated to impair public confidence in the State protection of the rights of property. "It is estimated that the value of the endowments with real estate of the charitable institutions in France exceeds £20,000,000 sterling; and there are some people here malicious enough to insinuate that a forced sale of charitable property has no other object than to give a lift to the public funds, or galvanize those *valeurs mortes* which represent the payments of the sinking fund. In any case it is difficult to understand in what manner the public will be the gainer." We earnestly hope that the proceeding may prove impossible as it is iniquitous. If this be the price of government subvention, the hospitals of Paris purchase such aid at too high a rate. The governors and directors know too well their duty, we believe, to allow themselves to become parties, even under government coercion, to the sacrifice of the solidity of their institutions to the passing interests of a Government, or the prostitution of their funds to purposes of political speculation.

EMIGRANT IMMORALITY.

It may be accepted as usually true that the more flagrant any evil may be, the more readily redress will be obtained. Sympathy is aroused in proportion to the magnitude of the suffering; and the remedy follows the more quickly that its necessity is painfully apparent. But here also there are limits beyond which the proposition cannot be applied; and, when these are passed, a converse rule will hold. There are occasionally abuses so enormous that they pass belief. The first and second revelations are simply passed over with shuddering incredulity. Nothing short of absolute proof brings home the conviction of their truth.

This has been the history of the sad stories of the vice and immorality which reign, occasionally at least, on board our emigrant ships. When the first statements of a surgeon appeared anonymously in the *Globe*, telling of wide-spreading vice, habitual prostitution, and, not unfrequently, rape, as the frequent incidents of the voyage, his statements were wondered at and disbelieved. They bore all the circumstantial impress of truthful relation; but they wanted the verisimilitude of moderation and calmness. Occasionally similar rumours have reached us, and, when authenticated, we have made them known.

An inquest, held in Sydney, March 10th, on the body of a female emigrant, aged eighteen, passenger by the *Stebonheath*, confirms all that has been said of the gross immorality which pervades these ships. The inquiry was of the most painful nature. There was a suspicion that the poor girl died of excitement and fright produced by personal violence offered to her chastity; she suffered also from a disease of the wrist-joint; and a dubious verdict was given. The statement upon oath of the surgeon, Mr. W. J. Rowland, and the matron, affirmed the prevalence of a general system of prostitution. Insubordination appeared to reign, since women who had been confined for acts of impropriety when they were detected, were forcibly released by their paramours. The ship was a floating brothel. Amongst the women sent out were some of the scourings of the streets, and these corrupted others by their foul example. The more virtuous were overborne, and, it is to be feared, insulted and intimidated. Mr. Rowland exerted himself to his utmost to protect the innocent and the chaste; but he found his task difficult, and but little fruitful. His exertions evoked the deserved thanks of the jury, as the general profligacy called forth their well-merited censure. Surely this is a matter of terrible gravity and national importance! If the women whom we send forth to people our colonies become debased and corrupted, perhaps diseased, on their passage, we inflict a curse upon the colonists when we should afford them a blessing. It is a question of public health no less than of public morals. No man who is in possession of additional facts is at liberty to withhold them. Let the whole truth be spoken, and the matter be thoroughly sifted. If this great moral sin—this sanitary pestilence—be indeed upon us, we must hasten to wipe it out.

Reviews and Notices of Books.

Essay on the Pathology of the Blood and its containing Vessels. By THOMAS A. WISE, M.D., F.R.S.E. Edinburgh: A. & C. Black.

THIS work aims at supplying a description of the changes in the blood in vascular diseases. The present volume is a reprint of treatises printed first in Calcutta in 1831, and in London in 1842. They discuss, at length, the changes of the blood in sthenic diseases, and the causes and terminations of the various types of inflammation. The influence of local inflammation upon the functions of secretion and absorption, producing dropsy, is dealt with systematically. Under the heading of "Morbid Changes in the Blood from Admixtures," we find, curiously enough, an account of cases in which various entozoa have been found in the vessels. The admission of pus is not mentioned in this section; the entrance of air is dealt with in a very meagre and unsatisfactory manner. The subsequent chapters proceed to discuss the diseases of vessels, arteries, veins, and capillaries. Unfortunately, however, they are rather full than complete, and very diffuse without being equally informing.

An Effectual and Simple Remedy for Scarlatina and Measles. By CHARLES WITT, M.R.C.S., L.R.C.P. London: George Philip & Son.

DR. WITT has aimed in this pamphlet at bringing under the notice of the profession the very valuable effects of the administration of sub-carbonate of ammonia in scarlatina. Dr. Witt, following in the steps of the late Mr. Wilkinson, rarely gives less than three grains at a dose, repeating or increasing it according to the urgency of the symptoms. No acid drinks must be allowed; perfect quietude is required, and care against chills. This treatment Dr. Witt declares, as the result of his experience, to be the most successful which has been devised, and he recommends it with great earnestness.

Ophthalmic Hospital Reports. No. III. London: Churchill.

This youngest of our professional journals has assumed a really vigorous and healthy aspect, which indicates that it was not called into existence prematurely, and it is not likely to languish from deficiency of aliment. It opens with a very interesting communication from Dr. von Græfe, giving an account of his operation, which he complains that Mr. Critchett has misunderstood and consequently misstated. The published cases and reports include an interesting communication, by Mr. France of Guy's Hospital, of a case of duality of the pupil; and a very careful and scientific paper, by Mr. White Cooper of St. Mary's Hospital, on microphthalmos and cases akin to it, in which this curious and interesting subject is skillfully dealt with. Mr. Streatfeild, the intelligent editor, describes a new operation in entropion and trichiasis—by grooving the fibro-cartilage—of his own device.

The Equalization of the Poor's Rate of the United Kingdom proved to be both Equitable and Practicable, &c. By G. L. Hutchinson. London: A. Mills. Pamphlet.

Mr. Hutchinson has long been an advocate of the plan indicated by the title above quoted, upon which a few years ago he produced a work, the chief features of the same being reproduced in the present treatise. In a preliminary address he affords us an insight into some correspondence between himself and the Poor-law Commission, from which it appears that although in 1845 and 1846 some very elaborate tables and computations made by Mr. Hutchinson, and offered to the Poor-law Board, were not deemed to be "of any practical service" there, and he was told that there were "no funds at disposal" to pay for them, in 1848 he was informed that the president of the Poor-law Board had "just ordered a similar calculation to be prepared." *Proh pudor!* It is to be hoped, however, that the soundness of the author's views are becoming recognized in geometrical proportion yearly.

Mr. Hutchinson is the father of the proposal for the equalization of the Poor-rates, a question intimately connected with the duties and salaries of Poor-law medical officers; and in the year 1845 a petition from him on this important question was presented to the House of Commons by Mr. Wakely, the then member for Finsbury. That the equalization of the Poor-rate will be effected, cannot be doubted by any person who, with adequate capacity, has examined the subject; and when that act of justice is accomplished, it is to be hoped that the due interests of the poor, and the proper remuneration of their medical attendants, will not be unheeded. Mr. Hutchinson merits the thanks of the public for his labours in a good cause.

Observations on Naval Hygiene and Scurvy, more particularly as the latter appeared during a Polar Voyage. By Alex. Armstrong, M.D., R.N., &c. London: Churchill. 1858. pp. 117.

As in the various Polar expeditions that have left this country, scurvy has always occurred to a greater or less extent, and, with one exception apparently, has made its appearance during the first winter in the ice, it appeared to Dr. Armstrong a subject for inquiry to what circumstance it was owing that

"One ship, in no respect better equipped or victualled than the others, but in some respects placed under comparatively disadvantageous circumstances, enjoyed an immunity from the disease for a longer period than has been hitherto known, and was visited with less comparative mortality than has ever occurred on board any ship wintering in the Polar Sea."—p. 8.

The exemption from scurvy for an unprecedentedly long period here alluded to occurred on board H.M.S. *Investigator*, during the late expedition to the Polar regions, and of which Dr. Armstrong was the medical officer. In his present work he attempts to account for such immunity, as has been enjoyed by no other ship, narrating such circumstances in connection with the voyage of the *Investigator* as may have influenced her crew for better or for worse, describing the means adopted for the prevention of the disease, and finally treating of the disease as it occurred on board that ship.

"Scurvy did not make its appearance amongst the crew of H.M.S. *Investigator* until the spring of 1852, or upwards of two years and three months from the date of the ship's commission......But the causes in existence for producing scurvy were by no means few......Notwithstanding a sea voyage of six months' duration, and a sojourn of two winters on the ice, during the first of which we were on an allowance of food insufficient for maintaining the body in a state of health and vigour, and during the second of which our allowance was reduced to two-thirds of the original quantity, yet it was not until we had been nearly seven months on this reduced allowance that the disease made its appearance amongst us."—p. 36.

The chief *preventive* measures laid down by Dr. Armstrong are the following:—1st. To get together a good ship's company, or one composed of men of a high standard of health and apparent power of endurance. 2ndly. To attend to the state of the air between decks and of the decks themselves; "the former should be pure and dry, and the latter always dry." 3rdly. The proper clothing of the men. 4thly. The promotion of hilarity and cheerfulness amongst them. 5thly. The due regularity of the quantity and quality of the food, both animal and vegetable; and here must be included a sufficient supply of fresh succulent vegetables, particularly of the families *Cruciferæ* and *Aurantiaceæ.* This supply not always being attainable on board ship, its place must be filled by "lemon juice."

> "The lemon-juice with which we were supplied was of the most excellent quality, and consisted of two kinds, one of which was prepared by adding a tenth part of brandy, and the other was the acid simply boiled, and containing no spirit. The juice was kept in bottles, each containing sixty-four ounces, with a stratum of olive oil, about half an inch in thickness, on its surface and the bottles were carefully corked and sealed.......It was mixed in separate tubs, from which each man daily drank his allowance in presence of an officer. The adoption of this practice was attended with the happiest results. I had thus the positive evidence afforded me that every man in the ship drank his allowance (one ounce) daily, and was thus fortified with a regular daily quantity of a powerful anti-scorbutic. To this circumstance I unhesitatingly attribute not only the immunity we enjoyed from scurvy for a longer time than has ever been known before in the Polar Sea, but also our good fortune in maintaining an unprecedentedly high standard of health amongst our crew during the same period."—p. 18.

The navy allowance is half an ounce of lemon-juice daily, with the same quantity of sugar, after the men have been fourteen days upon salt provisions; but in Polar service double this allowance is daily given. With regard to the relative merits of the two kinds of lemon-juice, Dr. Armstrong could detect no difference in their therapeutic influence over the disease. He is, however, disposed to give a preference to the juice which has been prepared with spirit, as it remains clear and free from deposit in the bottle, while that which was simply boiled

> "Deposited a portion of its mucilaginous constituents in the form of a heavy, dense, cloudy-looking mass at the bottom of the bottle, apparently indicating that some change had taken place; but neither its power of neutralizing alkalies, nor its therapeutic efficacy was in the least degree affected."—p. 94.

The author believes that the opinion entertained by many, that lemon-juice becomes deteriorated by keeping, is quite fallacious, as "it will retain its virtues unimpaired for any length of time, provided that due care be observed in the mode of preserving it." Dr. Armstrong considers there is no disease in the treatment of which more early decided and certain manifestations of the effects of remedies are observed than in scurvy.

> "In proportion as we can supply those who are attacked with it with fresh animal food, fruits, and vegetables, so will the rapidity of the cure be effected. In the absence of these remedial agents, which act as specifics in the treatment of this disease, the same effects will be produced, but less rapidly, by the exhibition of lemon-juice alone in quantity proportionate to the severity of the attack; the therapeutic action of this powerful remedy being always much aided, and being more quickly seen, if the diet can at the same time be improved by the substitution, wholly or in part, of fresh meat for salt, where the latter has been in use. .... Lemon-juice, therefore, is, in my opinion, the sovereign remedy in the treatment of this disease, where fresh fruits and vegetables are not available"—p. 97.

As regards the *essential* pathology of scurvy, Dr. Armstrong views with much distrust all the hitherto advanced doctrines concerning it,—a deficiency of the salts of potash in the blood; an excess of those of soda; increase or diminution of the fibrine of the blood, &c., &c. He inclines to the opinion, however, that in all fully-developed cases "the amount of fibrine will be found diminished and its plasticity impaired."—p. 72.

Dr. Armstrong alludes to three forms of the malady as it came within his sphere of observation—1st, scrobutic debility or mild scurvy; 2ndly, scurvy proper; 3rdly, acute scurvy. We strongly recommend the careful perusal of the author's fourth chapter, in which the physiognomy and course of the different forms of the disease are sketched by the masterly hand of truthful experience. The whole treatise is essentially practical, and worthy the most considerate attention of the medical officers of the Royal Navy, as also of the Merchant Service.

On Localized Galvanism applied to the Treatment of Paralysis and Muscular Contraction. By R. M. Lawrance, M. D., Ophthalmic Surgeon to the Great Northern Hospital. London: Henry Renshaw.

Ingenious observers availing themselves of the recent discoveries of Faraday, du Bois Raymond, and others, have succeeded in giving to medical electricity an entirely new character. Amongst these stands prominently Duchene de Boulogne, to whose discoveries ample justice has been done by Dr. Lawrance. The treatise now before us places in a simple and distinct manner before the reader the history of medical electricity from its earliest application in medicine to the present day. All the experiments made by the surgeons of France and Germany have been tested by the author, leaving nothing to conjecture. Thus the work is eminently practical, claiming nothing for the therapeutic agent recommended but what it seems fairly entitled to. Pathological surgeons will find many useful hints scattered throughout the work. Unlike some continental electricians, the author, never forgetful of the progress made by pathology, is yet fully aware that much of the past is now no longer admitted or received as truths, and he avails himself of all the modern improvements in the healing art, to substantiate his views.

> "There was a period" (observes the author) "in medicine, when, influenced by the labours of the illustrious pathologists of a past age—Lietaud and Morgagni, Bonetus and Baillie, diseases accompanied with organic changes of the organs were held to be uniformly incurable. We now know that they are not so. There was a period, and that not a remote one, when amputations of the limbs were practised for diseased conditions which the modern surgeon now treats without mutilation. In this new phasis of medicine and surgery, medical electricity enters and takes its place, not without well-grounded expectations of its therapeutic powers being shortly fully recognised and acknowledged in all the departments of the healing art."

THE INDIAN MUTINY.

LIST OF MEDICAL OFFICERS OF THE BENGAL ESTABLISHMENT WHO HAVE FALLEN DURING THE RECENT MUTINY.

SURGEONS.

SENIOR SURGEON JAMES GRAHAM, M.D., superintending surgeon Trans-Ravee Circle.—Murdered during the mutiny at Sealkote. Dr. Graham, accompanied by his daughter, was attempting to escape to the fort in his buggy, when he was shot by troopers of the 9th Cavalry. Miss Graham was spared, and drove on, carrying with her the lifeless body of her father. Dr. Graham entered the service in 1819, and having accumulated a comfortable independence, intended to retire during the present cold season. The following is a summary of his war services:—Served as staff and senior surgeon with the left wing of the army of Gwalior, and was present at the battle of Punniar, in December, 1843; served throughout the Sutlej campaign; was present at the battle of Ferozeshuhur, and after that action was appointed superintendent of Depôt Hospital for all the sick and wounded of the campaign; was present with the brigade of Horse Artillery at the battle of Subraon. Two medals.

Christopher Garbett, officiating superintending-surgeon at Cawnpore.—Mr. Garbett was in the intrenchment with the force under Sir Hugh Wheeler; and it is said that he died of fever there. He arrived in India in 1827, and had no war services.

Surgeon John Banatyne M'Donald, 1st Regt. N.I.—Escaped to Lucknow, and died there on the 19th of August, from cholera. Served in the Cole campaign of 1832; was present at the battles of Moodkee, Ferozeshuhur, and Subraon. Medal and two clasps.

Surgeon H. H. Bowling, 28th Regt. N.I.—This regiment, stationed at Shahjehanpore, murdered its officers while they were in church, surrounding them and shooting them down.

Surgeon Kinlock W. Kirk, M.D., superintending surgeon of Gwalior and United Malwa Contingents.—During the mutiny at Gwalior, on the evening of the 14th of June, Dr. Kirk was shot in the presence of his wife, who pleaded to give her life for his. Dr. Kirk was one of the ablest and most promising officers in the service, and was so remarkable for professional zeal and administrative ability, that he was specially selected for the post he then held. His humanity was untiring; and a high military officer (who himself escaped on that terrible night), writing to us soon afterwards, said "Poor Kirk! I am so sorry for him. He could not have injured a living creature." Dr. Kirk entered the service at the close of 1838, and served in Bundlekhund in 1842, and against the Hill Tribes in Scinde, under Sir Charles Napier, in 1845. He was the author of an elaborate and ingenuous paper, on the "Fevers of Scinde," which was published in the "Transactions" of the Medical and Physical Society of Calcutta. He also published an admirable report on the "Medical Topography of Upper Scinde." The Lunatic Asylum at Bareilly, while under his superintendence, was a model of what such institutions for natives ought to be.

Surgeon Nathaniel Collyer stood next in the list to Dr. Kirk. He was surgeon to the 53rd N.I., stationed at Cawnpore, and is said to have died of fever in the entrenchment there, a victim to the awful privations and exposure of that indefensible position.

Surgeon Wm. R. Boyes, M.D., 2nd Light Cavalry, and officiating medical storekeeper, Cawnpore. Dr. Boyes and his family all perished in the bloody massacre at Cawnpore.

Surgeon A. W. E. Newenham, formerly residency surgeon, Indore, joined the 1st N.I. on promotion, and perished in the Cawnpore massacre, with his wife and three children.

Surgeon Thomas C. Heathcote, 10th N.I., Futtehgurh.—He escaped from Futtehgurh, and his whole family perished in the attack on the boats near Cawnpore. This medical officer was formerly civil surgeon of Saharunpore, where he was well known as a most expert and successful lithotomist.

ASSISTANT-SURGEONS.

Assistant-Surgeon J. M. Hay, M.D., civil-surgeon, Bareilly.—During the mutiny, Dr. Hay, with Mr. Robertson, the judge of the station, took refuge in the house of the Kotwal, a native official, who appeared to have exerted himself to protect them; but the mutineers found out their place of concealment, and barbarously murdered them.

Assistant-Surgeon Sam. Maltby, civil-surgeon Futtehgurh.—Killed with his wife in the attack upon the boats after leaving the station.

Assistant-Surgeon John Colin Graham, M.D., medical storekeeper, Sealkote.—Shot by the mutinous troopers of the 9th Cavalry when driving to the fort with his wife, who was spared. Dr. Graham established the fund for the widows and orphans of the subordinate medical department, and was its active manager up to the time of his death. Served throughout the Punjaub campaign, was present at Mooltan, Soorujkund, and Goojrat, and the subsequent pursuit under Sir Walter Gilbert. Medal and clasps.

Thomas Mawe, 12th N.I.—Escaped during the massacre of Jhansi, and perished of fatigue and exposure. Mrs. Mawe's account of their sufferings is most affecting; she survives her husband. Mr. Mawe served throughout the Punjaub campaign. Medal and clasps.

Hartwell S. Garner, 12th Irregular Cavalry.—Mr. Garner and his wife were both murdered by the troopers of his own regiment, that had long remained loyal under their brave and generous commanding officer, the late Major Holmes. One child of Mr. Garner was saved through the faithfulness of a native nurse.

Robt. Dallas Dove Allan, M.D., is supposed to have perished in the Cawnpore massacre, with his wife and child. Served at Moodkee, Ferozeshuhur, and Alliwal, medal and two clasps; also in the Punjaub campaign, medal and two clasps.

W. B. M'Egan, 14th Irregular Cavalry.—Massacred with his wife at Jhansi. Dr. M'Egan had seen some rough service with the 2nd Nizam's Cavalry, in the Deccan.

Thomas Moore, M.D. and B.A.—Murdered while travelling by dak to join his appointment at Sumbulpore, in November. Was present at the Sutlej campaign. Dr. Moore was the author of a volume entitled, "Selections from my Notebook," published in Calcutta in 1852.

Robert Lyell, M.D., civil employ, Patna.—This officer was shot down in the streets of Patna, while heading a party of the Seikh Guard who went out to quell an insurrection. He served throughout the Punjaub campaign, and saw much rough work in the Peshawur frontier while surgeon of the Guide Corps. This officer was remarkable for fearless daring and firm resolution; he was an excellent surgeon, and a most invaluable servant of Government.

Horatio Philip Harris, officiating civil surgeon, Cawnpore, perished in the massacre there. Mr. Harris was wounded with two balls, and then addressed the rebels, "Shoot me or kill me; my countrymen will revenge my death." Two Sowars then cut him down. Mrs. Harris perished with her husband.

George Hansbrow, superintendent of the Great Central Jail, Bareilly, cruelly massacred by the mutineers there. Mr. Hansbrow was formerly one of the students in human and comparative anatomy at the Royal College of Surgeons in England.

John Pierce Bowling, 56th Native Infantry.—Perished in the massacre at Cawnpore with Mrs. Bowling and one child.

A. Dopping, B.A. and M.D., 54th Native Infantry.—Murdered during the mutiny at Delhi, where he held the post of garrison assistant-surgeon.

Marcus George Hill, Oude Irregular Force.—Murdered in the mutiny of his regiment at Seetapore. He was the author of an elaborate paper on "Insolation," in the third volume of the "Indian Annals."

Robert Henry Bartrum.—Killed in action in the advance on Lucknow under Sir James Outram. Mr. Bartrum fell near the Residency and almost in view of his wife, whom he hoped in another minute to meet.

Daniel McAuley, M.D., Artillery.—One of the many victims of the Cawnpore massacre. Mr. McAuley received his education at the Belfast Medical School.

Edward Darby, M.D., died Nov. 22nd, from the effects of a gun-shot wound received in action in the advance on Lucknow under Sir Colin Campbell, on the 27th of the previous month. Mrs. Darby and her infant also perished at Cawnpore. Dr. Darby was a young officer of great promise, having stood first on the list of passed candidates of his season.

W. H. James, M.D. and F.R.C.S.I.—Dr. and Mrs. James were both murdered at Augur, when the men of the Gwalior contingent mutinied there.

The other casualties—Died; Surgeon William Amys Rolfe. ~~Assistant-Surgeons~~ Samuel R. Tucker, M.D., Wm. Gardiner Morris, M.D., John Kirk, William Boyle Chavasse, Thomas H. Woodward, Frederick C. Bushman, T. Carthew Gillett.

Retired—Surgeons-General Charles Renney, C.B., and James Buncle Clapperton; Superintending-Surgeons John Grant and Thomas R. Dempster; Surgeons Kenneth McKinnon, M.D., and Robert H. Irvine, M.D.—*Indian Annals of Medical Sciences.*

Foreign Department.

A Urethral Bladder.

At a recent meeting of the Surgical Society of Paris, M. Demarquay presented the urinary organs of a young man of twenty-two, who died under the care of M. Monod, at the Paris Maison Municipale de Santé.

The patient, much given to onanism, had, three years ago, retention of urine, with severe pain in the hypogastrium. Attempts were made to relieve him with a catheter, but without success. Since that time the urine always dribbled away; and a tumour gradually formed in the perinæum. When admitted, the swelling was much larger than the fist, almost half globular, very superficial, and fluctuating. It projected externally, and also into the rectum, where it was felt as high as the finger could reach.

M. Demarquay passed a catheter, which went easily into the fluctuating pouch, and a small stream of urine followed. But the instrument could not be passed into the bladder. An incision was then made on the lower part of the tumour, when urine freely gushed out. A catheter was introduced into the wound, which found its way to the posterior opening of the urethra, and thence into the bladder,* the capacity of which seemed to the operator extremely small. The instrument was left in the bladder, and was used to inject fluid into that viscus every morning. (The kind of fluid is not mentioned.) A few days afterwards the man was feverish, and complained of a pain in the abdomen; the injections were given up, but the instrument was allowed to remain. The symptoms, however, grew worse, and the patient died. (It is not stated how many days the catheter was left in the bladder.)

On a post-mortem examination, a sub-peritoneal abscess was found reaching from the pelvis to the diaphragm, without any traces of peritonitis. The origin of the purulent sac could not be discovered, and the tissues around the wound made in the perinæum were in a healthy state. The bladder was found in a very remarkable and perhaps unique condition. The kidneys and one of the ureters were healthy; the other ureter was dilated to the diameter of the little finger. The bladder, extremely contracted, was reduced to the size of the trizone, and presented only two-thirds of an inch in diameter; the prostatic portion of the urethra was, on the other hand, much dilated, and might have lodged a small apple. At the bulb, the urethra presented an enormous dilatation, forming a spacious pouch, in which a man's fist might easily have moved. The parietes of the pouch were thin, and even transparent in some places; the mucous membrane lining the pouch was marked by a few eroded spots, and was continued posteriorly and anteriorly with the mucous membrane of the urethra. No stricture nor any possible lesion were found in that canal anterior to the pouch; and the mechanism by which the dilatation had occurred remained obscure. The patient stated that the pouch had existed about three years.

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* This is certainly a very uncommon and particularly lucky steering of the catheter.—Sub-Ed. L.

A member of the Society, M. Tarjovay, called attention to the fact that the portion of the urethra situated in front of the dilatation had not the least trace of spongy tissue; also that the parietes of the canal were quite membranous and transparent; whilst, in the normal state, they should be surrounded by the corpus spongiosum, which is generally two or three lines in diameter.

Unexplained Perforation of the Rectum, followed by Fatal Peritonitis.

At a late meeting of the Medical Society of the Paris hospitals, M. Legroux mentioned the case of a man of thirty-four who was seized, after having partaken of sausages and wine, with pain in the lower part of the abdomen. Warm infusions and enemata did not relieve him, and he was admitted into the hospital. All the symptoms of acute peritonitis soon occured, and the patient sank about twenty-four hours after admission.

On a post-mortem examination, general peritonitis with effusion of fæcal matter in the true pelvis were observed, and the cause of the effusion was found to be a perforation of the anterior portion of the rectum, immediately above the reflexion of the peritonæum from the posterior aspect of the bladder. The hole was round, about half an inch in diameter, and looked as if punched out. The margins were slightly grey, and no trace of inflammation was found in the vicinity. M. Legroux gives no opinion as to the cause of the ulceration which brought about the perforation.

THE SYSTEM OF GRATUITOUS ADVICE.

Amongst the many great grievances which, alas! afflict our profession, if we were called upon to signalize one more injurious than the others, it would be the extent to which advice and aid in various ways are called for and supplied without payment. Why, we would inquire, is a medical man to be the only individual in the whole community called upon and expected to act thus, professionally? In an hospital the chaplain is paid; the secretary; the solicitor; the medical man alone, the most essential person in the institution, remains, as a general rule, without remuneration. Of course, it is assumed that he receives an equivalent in the shape of an introduction to practice; and no doubt sometimes he does; but very often men devote their lives with the greatest assiduity to the service of the indigent poor, and yet never succeed in obtaining practice, and, unless they possess competent fortunes, may linger in poverty and obscurity until the hour of death. But there are not wanting instances of parties obtaining large practices without being attached to any public institution. Sometimes the fees of pupils afford remuneration. The fact of the position of medical officer to a public institution being so much sought after will, doubtless, be brought before the public as a reason for the continuance of the present state of things, just as a similar argument is used by Poor-law guardians as a justification for grinding down their medical officers to the lowest amount of pay at which a qualified practitioner can be obtained; for the bucolical or commercial mind does not understand subtleties. With it a doctor is always a doctor. Believing as we do that the system which we condemn, as at present pursued, is the monster evil of the profession; that it pervades it like a cancerous diathesis, manifesting its presence outwardly in many parts, we shall proceed to prove—1st, that this system is in itself wrong, wrong in principle, wrong abstractedly; and 2ndly, that while it is most injurious to the interests of the profession at large, it is of very doubtful benefit indeed to the public. We wish, while we indicate the evil influence of the present state of things, it were in our power to furnish a remedy. We are afraid that at present we can only say—herein the patient must minister to himself; but it will be something if we can succeed in directing the attention of the profession to the consideration of a subject, second to none in importance, and which we verily believe more than any other involves the social standing of the medical body.

We need not remind our readers of Falstaff's dissertation on honour. Will philanthropy pay a butcher's bill, or satisfy an impatient landlord? What will the tradesman say if his medical debtor should plead, in bar of legal process, that he has prescribed gratuitously for hundreds or thousands of his indigent fellow creatures? In fact, the public as a body cannot comprehend why the services of the profession are bestowed to such an extent for nothing. The public suppose that there is some mysterious source of emolument. But the general result is a sort of feeling or impression that medical men in a pecuniary point of view are a peculiar people, to whom the community is not bound by the ordinary rules of commercial morality, but who of course are by no means entitled to a reciprocity of consideration in this matter. When a tradesman is canvassed for his votes on the occasion of a contested election for an infirmary or dispensary (and what frightful degradation is too often encountered on such occasions!) he naturally concludes—knowing perfectly well his own maxim of "Nothing for nothing"—that the mighty boon he is asked to confer leads to some great emolument; how, he does not exactly see, but he cannot quite believe that the gentleman who seeks to become the happy object of his choice, often at great expense of money and time, and sacrifice of self-respect,[*] does so only that he may devote his dearly-bought professional position, his acquired skill, and his time, to the public service for *nothing*. How often, if a reasonable remuneration were to attend the office of medical officer to a public institution, might not the young physician or surgeon, possessed of talent but without capital, be thus helped forward? Such appointments would then tend to remedy one of the great drawbacks under which we labour, contrasting our position with that of the other learned professions,—viz., the want of endowments. We contend, however, irrespective of consequences, that it is absolutely wrong for medical aid to be supplied gratuitously as a rule. We have divine authority for the maxim that "the labourer is worthy of his hire," and in this sublunary world such a general principle, founded on the very necessities of our nature, cannot be violated with impunity. As if to add insult to injustice, the physician or surgeon who devotes his often invaluable services to an hospital or a dispensary, has frequently less influence and power in its management than the subscriber of one or two guineas; nay, if he interfere in its general concerns he is likely to be regarded as an interloper. So much for the principle involved: let us now see what are the ruinous consequences of the system.

In the second place, then, the most obvious effect of the gratuitous system, practised publicly and privately, is to diffuse a general idea of the worthlessness of medical advice in a pecuniary sense—a sort of notion that as it can be had so often for nothing it is not worth paying for. Hence we should not be surprised if the stinginess of life insurance offices, Poor-law boards of guardians, public bodies of all kinds—nay, of the Government itself, be not traceable more or less directly to this system of gratuitous relief, considering the extent to which it is carried. When it is seen that on every hand medical men, for the sake of appearing to have practice, are willing, either publicly or at their own houses, to work to almost any extent for nothing, the plain inference amongst those who style themselves pre-eminently men of business, is that the merest trifle must be a thing of value to the *doctor;* hence follows poor remuneration, and as poverty breeds contempt, in return for our philanthropy—in return for our unrewarded toil—we incur contempt, and, as a body, lose social caste in the commonwealth. The world respects mammon, and, for our pains, we do not even secure its respect.

Again, both in public institutions and private practice, advice is given most improperly to persons perfectly able to pay for it. When letters of recommendation are required, subscribers often send their servants or workmen; where nothing of the kind is requisite, many do not scruple to make themselves objects of charity who, perhaps, are better able to pay a fee than is the physician to forego it.

Who ever heard of a druggist supplying drugs to an hospital for the sake of the credit to be acquired by the patronage of this or that great institution?

Another evil of the gratuitous system, as practised both publicly and privately, is the slovenly, hasty, and empirical mode in which advice is often given to crowds of out-door patients in infirmaries and dispensaries, and also in private practice, if such it may be called. What is to be thought of prescribing for hundreds, perhaps, of patients in a few hours, where there is neither time to keep proper registers, nor to make suitable examinations? But, of course, if one institution or individual does such things, another must follow the example, or forfeit the faith and good opinion of the public. It is the number that throng the waiting-room and portals of such and such an institution, and are published in reports as *relieved*, or are seated in the lobby at Dr. A's or Mr. B's, whose door stands invitingly open for the inspection of passers by, that is to be considered! The medical man knows what all this means—*ad captandum vulgus.* We will venture to say that this system, as often practised, resolves itself into arrant quackery, if not into criminality. Patients are thus often induced to leave their homes in most improper conditions of disease, and made to wait in crowds, and, after all, hurriedly attended to. Now, all this would be checked if all the medical officers of public institutions were paid, and if every case were properly registered—name, residence, symptoms, treatment, and result—then some limit would be put to the indiscriminate relief which is thus afforded. No case should be taken which required attendance at home, unless the institution maintained paid officers to visit the out-door patients. The drug bill would thus be diminished, the character of the relief afforded be improved; and, in towns, the parishes would be compelled to provide more adequate relief for the sick poor at their own houses. One way or the other the burden would be shifted in great part from the shoulders of the profession to those of the public. By the system of gratuitous medical relief, as practised by consulting physicians and surgeons at their own houses, not only they themselves, but the general practitioners, are often injured. Why should not the medical man who has been highly educated, who has spent years in great hospitals, probably visited many countries in search of professional knowledge, enter at once upon private practice, and wait, like a barrister, instead of having recourse to this low and disingenuous mode of bestowing advice *gratis?*

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[*] The contests for some great provincial hospitals involve a canvass hardly inferior in extent, cost, and labour, to that of a parliamentary contest. We could mention a case where three counties had to be personally canvassed, where attorneys were retained as agents, and where the printing, posting, and various expenses amounted to some hundreds of pounds. These contests too often give rise to much heartburning amongst medical men, and all for an eleemosynary appointment! This is a great professional scandal.

At present, it is sufficient for us to indicate the evil, and to trace, somewhat faintly, the mischief which attends it; for we verily believe that it would be most difficult to appreciate the whole extent of the unfortunate results which flow from this fountain of error. Difficult as the remedy may be, it is not beyond reach. To deal with such matters as this should be part of the functions of a council representing the whole profession, and empowered by law to act in its behalf. We recommend the subject to the earnest consideration of all medical men anxious to improve the status of the body to which they belong.

Miscellaneous Correspondence, &c.

"Audi alteram partem."

SUGGESTIONS FOR AN IMPROVED MODE OF VENTILATION.

[LETTER FROM SIR JAMES MURRAY, M.D.]

To the Editor of THE LANCET.

SIR,—During this Thames panic, perhaps some M.P. may reflect in earnest that chemistry and machinery have effected many wonders, and can still accomplish more: they can certainly furnish means to *reverse* the common methods of ventilation, by adopting aëriform *traction* instead of *repulsion.*

To copy, in some degree, the material operations of the lungs and heart, may afford better means of leading away offensive gases, smells, and miasms, than by *driving* them off by blowing. The usual modes of renewing the air in buildings, channels, and institutions, only disturbs—commingles bad air with good. But by imitating the mechanism of respiration, and securing exhalation, *first*, from chambers or cavities, they will instantly be filled by inspiration of good air, to replace, by equal volumes, the foul vapours withdrawn.

A capacious tunnel, or long reach of a cemented drain, ten or twelve feet deep from roof to floor or invert, serves the purpose. The line of level of the invert descends by three steps, of ten or twelve inches deep, to serve for a rapid current of sewage, by gravitation, and to present the riser of each step as a lip or stay for valves to press against, that the stream may flow to the exit, tank, well, or outfall, in one direction only. A second floor of slates, or the like, divides the tunnel longitudinally into two stories. Three valves depending from the arch or upper floor, separate the long ranges into three or four chambers. On the platforms between each valve, several perches long, beds of filtering materials are spread in frames—gravel in the first area, sand in the second, charcoal and peat mould in the third, and magnesian limestone with broken coke in the fourth floor, for percolation, to clear the slush and correct putrid smells, &c.

Whilst the drainage percolates through these porous filters, its offensive gases ascend by an opening into the first space of the second story. This part of the gallery is ranged with crates of fresh dry lime, slaked, and mixed with broken coke, to abstract the carbonic acid and sulphuretted impurities from the gases, smoke, breath, and animal effluvia.

The gases are drawn along, by the operations of rarefaction, through loose shelves, cages, and nets of porous powders, coke, &c., moistened with muriatic acid, to detain ammonia, and to purify the air, as it did long since in the Cathedral of Dijon, when abandoned to malaria.

Through the other reaches of this long gallery the gases are drawn through magnesian and carbonaceous shelves of powders, to mask and abate putrid effluvia and to form triple salts. Whilst the liquid race descends through refining sieves along the under floor, the aëriform fumes traverse the dry, powdery, sifting purifiers, through which the gases are drawn to the *traction* end of the arch or tunnel.

The reason why deodorizing has always failed is this: that the witches treated the fluids, solids, and gases, all in the same cauldron, and that there never has been established any effectual means of *drawing* the offensive gaseous atmospheres through a proper series of *separate edulcorators*, each fit to separate and fix, in silt or sediment, the particular obnoxious quality to which the antidote is alone adapted.

As a very moderate rarefaction suffices to raise the guage to a pound or two on the inch, the exhausting means are numerous and economical. Where there are no long valves or leakage, and the motive power is little, an engine like that of the atmospheric railway would effect the traction of many square miles of offensive gases daily, and send them, decomposed, scentless, and colourless, up the steam funnel, and in other localities up lighted lamps and spouts of houses, connected below the chimney tops.

I am, Sir, yours &c.,
J. MURRAY, M.D.

June, 1858.

N.B.—Where hospitals, barracks, towns, or cities require modifications of these principles on a large scale, duplicate tunnels and tanks are best adapted, to clear out soot, silt, and guano from one, whilst the other is in operation.

DYSPNŒA FROM WEAK HEART.

To the Editor of THE LANCET.

SIR,—THE LANCET contains the report of two cases narrated by Dr. Ogier Ward, before the Medical Society of London, in which he states that he believes "the dyspnœa in these cases arose from the heart being too weak to send a proper supply of blood through the lungs." This, I imagine, must be the cause of dyspnœa in the aged much more frequently than is usually supposed, in support of which the following case offers an example:—

An old lady, aged eighty-four, in whom no structural disease of either heart or lungs can be found, is frequently attacked with most distressing dyspnœa. At the commencement of the attack, her pulse becomes smaller, then intermits, and, if unrelieved, it becomes quite imperceptible, her breathing becomes most distressing, and each gasp appears as if it would be the last. If in this condition a little stimulus be administered—either the compound spirit of ether, the chloride of ether, or the sesquicarbonate of ammonia—she begins to improve, the pulse returns to its natural calibre and regularity, and the dyspnœa disappears simultaneously, and she continues in a comfortable state for days and sometimes for weeks without a remission.

The case has extended over a period of twelve months, and the last attack was relieved by small and frequently-repeated doses of the sesquicarbonate of ammonia.

I am, Sir, your obedient servant,
J. G. Barford, M.R.C.S.

Wokingham, Berks, June, 1858.

REMARKS ON VACCINATION, AND ITS CAUSES OF FAILURE.

To the Editor of The Lancet.

Sir,—As the subject of vaccination is one in which the public, are very much interested at the present time, I take leave to offer a few remarks upon it.

Having practised vaccination for upwards of fifty years, I have great pleasure in giving testimony to its efficacy as a preventative against small-pox when properly carried out. I shall, therefore, briefly endeavour to point out the causes which, in my opinion, have brought vaccination into disrepute. In the first place, the prejudice of the public is very much against it; and secondly, the careless and slovenly manner in which it is performed, in consequence of the medical men not being sufficiently remunerated for their trouble (which is something very considerable), more especially in the rural districts. If it is to be carried out successfully, it must be by the energy and perseverance of medical practitioners, which can only be obtained by rewarding them liberally for tried services. It is a very common case that, the child having been vaccinated, the parents give themselves little or no trouble about it, more especially if there happens to be a pustule or vesicle of some kind. When vaccination was first introduced there was much more attention paid to it than there has been of late years. At that time it was customary for the medical men to visit their little patients several times after vaccination, and carefully watch the progress of the vesicle, and see that it passed through its various stages, so accurately described by the late Dr. Jenner.

I conscientiously believe it is from want of that attention that so many cases of failure have lately occurred. A spurious disease may here have been introduced, and propagated from one to another. I conceive it is almost impossible that a medical man, who visits his patient only once on the seventh or eighth day after vaccination, can pronounce whether the disease is or is not genuine cow-pox. Again, I have often thought that the vesicle being broken or otherwise destroyed is not unfrequently a cause of failure, by preventing the virus from being broken up into the system, without which there can be no security against the contagion of small-pox. If, as frequently happens, there is only one vesicle, and that happens to be broken or destroyed, the patient ought to be re-vaccinated. I have always thought it the safest way to vaccinate on both arms, and if there is occasion to take matter to leave one of the vesicles entire; and in these cases where there is only one vesicle, and the practitioner is compelled to take matter, the patient ought to be re-vaccinated on the opposite arm at the time of taking the matter. My opinion is, that if the foregoing rule were strictly carried out, we should very seldom hear of cases of small-pox after vaccination, and thus the confidence of the public would be obtained.

I am, Sir, yours, &c.,
J. Davies, M.D.

Coleshill, June, 1858.

"ERETHISMUS TROPICUS."

To the Editor of The Lancet.

Sir,—By the accounts of the disastrous affair at Judgespore, in April last, recently published in this country, it appears that the great loss of life on that occasion was not effected by the fire of the enemy, but by apoplexy, the result of heat and fatigue. Of 144 men of the 35th Regiment, 8 only were killed, but 94 died by apoplexy. Of 50 of the Naval Brigade, 5 were killed, and 14 died by apoplexy. Of 5 Artillery, 3 were killed, and 1 died by apoplexy. Whilst of 100 Seikhs, 7 were killed, and none died by apoplexy. This appears to be the statement of an officer who was present, and his remarks on the causes of the great loss of life are interesting, as pointing to the real nature of the disease, and to precautions not to be overlooked in Indian military hygiene. He says, "I am inclined to believe that if the men had received something to eat and drink, and their usual stimulus (rum), which they generally receive, and a little rest before going into the field, that one-fourth of them would not have fallen as they did; instead of which they were marched hungry, and thirsty, and fatigued," &c.

There can be no doubt, I think, that the disease by which so many men were struck down in a few hours was not apoplexy, but an exhausting excitation of the system by tropical heat, which I have designated "erethismus tropicus."

I am, Sir, your obedient servant,

J. R. Taylor, M.D.,

Deputy Inspector-general of Hospitals.

Fort Pitt, June, 1858.

MEDICO-PARLIAMENTARY.

Friday, June 25th.—Lords.—The Duke of Buccleuch, in calling attention to the stench of the Thames, declared that the Government must take the matter into their own hands, and forthwith take strong measures.

The Earl of Malmesbury felt that the state of the river was a disgrace to the country, but feared that their lordships must bear the evil patiently until the Committee of the House of Commons now sitting had reported upon the subject.

A long discussion ensued, in which the principal members of the House united in calling for immediate measures of alleviation.

On the motion of Lord Torrington, returns were ordered connected with the Ranelagh sewer.

Commons.—Mr. O. Stanley rose to move for a Commission for the embankment of the Thames and intercepting of the sewage which flows into it. He called attention to the history of the Victoria sewer as a model of mismanagement.

Lord John Manners said that he had nothing whatever to do with the Victoria sewer. He found that up to May last, £73,321 18*s.* 6*d.* had been expended on it.

The Chancellor of the Exchequer promised that the Government would do its best to allay the present evil.

Monday, 28th.—Lords.—The same engrossing topic occupied the House. Lord Malmesbury announced that the Leicester system of deodorizing the sewers during the hot months had been initiated. It would be dangerous to work at any plan of sewage at present.

Commons.—Mr. Roupell renewed the discussion on the state of the Thames, affirming that a certain part of the expense of any future operations must be defrayed by imperial taxation.

The Chancellor of the Exchequer announced that the Government had authorized an expenditure of about £1500 per week for lime to be used as a deodorizer

News Items, Medical Facts, &c.

Death caused by Inhalation of Chloroform.—We lately alluded to this accident as having occurred very recently at Paris. The patient was a soldier, about forty-five years of age, who was admited into the military hospital of Gros Caillou, under the care of M. Ceccaldi. On the 27th of May last, the man was brought into the operating theatre to submit to the removal of one of his testes, supposed to be affected with cancer, the disease eventually turning out to be tuberculous. The apparatus used for the inhalation of chloroform consisted of a piece of linen folded into a cone, into which a little charpie was placed to imbibe the chloroform. The patient went on breathing very quietly for two minutes, when the cone was removed; but anæsthesia not being found complete, it was thought advisable to apply it again. The patient then suddenly sat up, his eyes staring and wide open, the pupils fearfully dilated, his arms stretched out, the muscles violently contracted, and the expression of his face being that of a man who is choking and trying to recover his breath. He then fell back again on the table, gave a strong expiration, and remained motionless, apparently, and as the sequel proved but too truly, dead. Not more than two minutes and a half or three minutes had elapsed since the inhalations had begun. All the most approved means of restoration proved useless. The autopsy revealed a considerable quantity of miliary tubercles in the right lung, the apex of which was the seat of a rather large vomica. The right testicle was transformed into a tuberculous mass of the size of a turkey's egg. It would appear, from this case, that inhalations of chloroform should be avoided where we suspect tubercles, as the incomplete manner in which hæmatosis takes place explains the asphyxia which in this instance occurred, under the influence of circumstances which do not produce it so rapidly in ordinary cases. It is worthy of remark that the patient breathed very quietly until he suddenly started and died, death not being preceded by syncope.

Lunatic Asylums.—The number of licensed houses in England and Wales for the care (and, it is to be hoped, the cure) of lunatics was on the 1st of January last, 113. In the licensed houses of the metropolis the total number of lunatics was 2623; viz., 1306 private and 1317 pauper patients. The sexes are pretty equal as regards private patients, but amongst the paupers the number of the females exceeds the number of the males twofold. Most of these metropolitan asylums are agreeably situated in the suburbs, and have spacious gardens, lawns, and pleasure-grounds for the use of the patients. Sussex House, at Hammersmith, the excellent establishment of Dr. Forbes Winslow, has no less than ten acres of lawn, garden, and meadow, for the use of the inmates, and Brandenburgh House (the sister asylum) has two acres; the establishment appears to be a joint one. The total number of lunatics in the provincial licensed houses on the 1st of January was 2647; viz., 1497 private and 1150 pauper patients.—*Times.*

Appointment.—Mr. Durham has been appointed Demonstrator of Anatomy and Lecturer on Experimental Philosophy at Guy's Hospital.

The Victoria Cross.—This highest reward of the brave, one of the noblest honours to which a military officer can aspire, has been bestowed upon two surgeons, whose gallant devotion we record in the plain and unaffected language in which it stands officially recorded for future times. More devoted heroism was never shown. Here is the extract from the *Gazette*:—"90th Regiment. —Surgeon Anthony Dickson Home; date of act of bravery, 26th of September, 1857. For persevering bravery and admirable conduct in charge of the wounded men left behind the column, when the troops under the late Major-General Havelock forced their way into the Residency of Lucknow, on Sept. 26th, 1857. The escort left with the wounded had by casualties been reduced to a few stragglers, and being entirely separated from the column, this small party, with the wounded, were forced into a house, in which they defended themselves till it was set on fire. They then retreated to a shed a few yards from it, and in this place continued to defend themselves for more than twenty-two hours, till relieved. At last only six men and Mr. Home remained to fire. Of four officers who were with the party, all were badly wounded, and three are since dead. The conduct of the defence during the latter part of the time devolved therefore on Mr. Home, and to his active exertions previously to being forced into the house, and his good conduct throughout, the safety of any of the wounded and the successful defence is mainly to be attributed.——90th Regiment.—Assistant-surgeon William Bradshaw; date of act of bravery, 26th of September, 1857. For intrepidity and good conduct when ordered, with Surgeon Home, 90th Regiment, to remove the wounded men left behind the column that forced its way into the Residency at Lucknow, on Sept. 26, 1857. The dooly bearers had left the doolies, but by great exertions, notwithstanding the close proximity of the sepoys, Surgeon Home and Assistant-surgeon Bradshaw got some of the bearers together, and Assistant-surgeon Bradshaw, with a small party of doolies, aided in defending and saving the wounded, when separated from his party."

A Female Inventor.—The Academy of Medicine of Paris listened, a few days ago, to an able report of M. Lagneau upon an alleged new form of scrotal suspensory bandage, invented by *Madame* Prodhomme. The leared reporter did not think the invention sufficiently original to deserve the attention of the academy.

Frightful Death from Frightful Surgery.—The *Jersey Times* records the particulars of an inquest lately held upon the body of a woman, seventy-three years of age, who had suffered from a tumour in the breast, which had been twice unavailingly operated on in London. She suffered great pain, and applied to a Dr. Hélie, of St. John's, Jersey, who said she was suffering from a cancerous tumour. He determined to remove it, and, accompanied by another Frenchman, on Wednesday, June 9th, the "Dr." proceeded to operate. Two women held the hands of the deceased, who was not under the influence of chloroform, and Després, the other Frenchman alluded to, held her feet. He commenced his dire work about half-past one and ended at two o'clock. The poor patient uttered three cries; the blood gushed from her in floods; she swooned, and died!! The following is the report of the examination of the body forty-seven hours after death:—"The body presented a large wound in the situation of the right breast, measuring eleven inches by nine, and of the circumference of twenty-six inches. The greater pectoral muscle had been removed, and the lesser removed in greater part, thereby exposing the ribs, which were in the greater extent of the wound bare and denuded of any covering. An incision about two and a half inches in extent, midway across the clavicle, had been closed by two sutures. Extensive ecchymosis, mottling, and emphysematous distension were observed over the neck and shoulders. The right subclavian vein was involved in the wound made for the removal of the breast; two very distinct perforations were noticed in it, within an inch and a half of its junction with the jugular. Bubbles of air very freely escaped from these two apertures, and were also found distending most of the superficial venous trunks. On inspecting the cavity of the thorax, the right lung was found much collapsed and comparatively devoid of air, offering to our minds the strongest presumptive evidence that the cavity of the chest was opened in the performance of the proceeding which we were called upon to inquire into. The heart was found fatty, its cavities and large vessels remarkably empty of blood, but containing much air. The left lung was healthy, and filled the cavity of that side. The liver, stomach, and other organs were healthy. The brain, in its structure cavities and vessels, were healthy; air freely escaping wherever any of its sinuses or vessels were divided.

G. M. Jones, M. R. C. S. Eng. & Edin.
M. Blood, M. R. C. S. and M. D.
Ed. Marett, L. R. C. S. I.
Alfred Godfray, M. R. C. S. Eng.
Charles Vaudin, M. R. C. S. Eng.,
Underg. Univ. Lond."

Dr. Hélie has been arrested, but admitted to bail in the sum of £150. The following verdict was returned:—"That the deceased died on Wednesday, June 9th, 1858, whilst Charles Alexandre Désiré Hélie, styling himself 'officier de santé and doctor,' was performing the removal of the right breast of the deceased; and the members of the inquest are of opinion that, by his negligence in the performance of so hazardous an operation, and especially in operating without the assistance of medical men, the said Hélie has rendered himself guilty of manslaughter, by imprudence and want of skill." We shall be anxious to see what will be the verdict of the jury upon the trial of the accused under the coroner's warrant.

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AND CORONER FOR THE COUNTY OF MIDDLESEX.

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A PRACTICAL

Course of Lectures

ON URINARY DISORDERS;

EMBRACING THEIR

DIAGNOSIS AND MEDICAL TREATMENT.

Illustrated by numerous Engravings, displaying the Principal Forms and Modifications of Urinary Deposits.

BY A. H. HASSALL, M.D., F.L.S.,

PHYSICIAN TO THE ROYAL FREE HOSPITAL, AUTHOR OF "FOOD AND ITS ADULTERATIONS," ETC.

URIC ACID.

DEPARTING for a short time from the order I had sketched out for myself, and postponing for the present the articles on Creatinine and Çystine, I shall now proceed to treat of Uric Acid.

Uric acid, or, as it is frequently but improperly termed, lithic acid, is one of the normal nitrogenous and excrementitious constituents of the urine.

It was called lithic acid by its discoverer, Scheele, from *lithos*, a stone, he having first detected it as a constituent of urinary calculus or stone; it received its present name of uric acid from Fourcroy.

The following formula represents its ultimate composition :—

$$C_5\ H1\ N_2\ O_2 \text{ plus } H\ O.$$

It occurs in the urine of man, of the carnivora, of the omnivora, but not in that of the herbivora, at least in the free state, although it does so to a small extent, in the combined form, as a urate; it has been met with in this condition in the urine which is acid and contains urea of the unweaned calf of from three to four weeks old. It never occurs in the blood in a free state, but combined with soda or other bases. The first situation in which it is ever encountered in its uncombined state is the lobules of the kidney, and its presence in this state in that situation, as well as in the urine, may be regarded as accidental.

The urine of birds, both carnivorous and granivorous, and of serpents, which, as it is well known, is generally discharged with the solid excrements, although in snakes it is often unmixed with the latter, consists almost entirely of urates. The red excrement of butterflies consists entirely of alkaline urates, and the same substances are contained in the excrements and biliary vessels of many larvæ and beetles.

The uric acid which is precipitated in such abundance in certain morbid conditions does not exist even in the urine in a free state, but is thrown down from its combinations, in the form of urates, with certain bases, usually chiefly soda.

That it is not held dissolved in the urine in the free state is proved by the fact, that once precipitated, it cannot be re-dissolved, even when the urine is heated. It is therefore not correct to say, as is generally done, that uric acid is precipitated from the urine as it becomes cold; the precipitation of only a very small quantity of this principle can be accounted for in this way, since the urine is able to dissolve only a very minute quantity of free uric acid.

There are three circumstances which specially contribute to the precipitation of uric acid, whether free or combined,—decrease of temperature, increased proportion of urates, and acidity. Of these causes, sometimes one and sometimes another is the more efficient, but usually they all concur in a greater or less degree in causing the deposit.

The free acids of the urine by which the decomposition of the urates is usually effected are the phosphoric and lactic acids.

So little soluble is uric acid in the uncombined state that it takes, according to MM. Robin and Verdeil, 1720 parts of water, at 15°, to dissolve one part of uric acid and 1150 parts of boiling water. The proportion of uric acid in the urine is even much less than 1 part in 1000, the quantity given by Henry, and adopted by most authors: in healthy urine the quantity varies from ·03 to 1·0 in 1000 parts, about ·04 or ·05 being the average, including both the free and combined acid.

In round numbers, the average quantity of uric acid daily excreted may be stated to vary from six to ten grains.

These quantities are of course many times exceeded in certain pathological states, the acid being in a state of combination; but if a greater proportion than 1 in 1500 of free acid were present it would become immediately precipitated.

"The conditions," remark MM. Robin and Verdeil,[*] "of the formation of free uric acid are the mixture of an urine, neutral or alkaline, containing an acid capable of displacing that of the urates. As to the simultaneous formation of the two urines in the kidney and the ureters, it has been demonstrated experimentally, in the rabbit, by M. Cl. Bernard, the anatomical conditions being in the main similar in man, and the formation of crystals of uric acid in the kidney, leads one to believe that it is the same even here."

From the small quantity of uric acid nominally present, as well as from its occasional absence from the urine of man, the dog, and the cat, MM. Robin and Verdeil regard it as an immediate proximal principle, which is almost entirely pathological: that, in fact, it chiefly forms deposits which are morbid or almost so. Uric acid is certainly purely excrementitial, its retention in the organism becoming an obstacle to the regular performance of its functions.

Uric acid, although so little soluble in water or urine, as such, readily becomes so when in contact with certain salts; thus phosphate of soda dissolves uric acid indirectly—that is, part of the soda combines with the uric acid, forming a soluble urate. It has been particularly observed by Heintz,[†] that uric acid is dissolved in notable quantity when cast into boiling urine, deprived by filtration of all alkaline urates. As it cools, the urine deposites an amorphous powder, which is not uric acid but an alkaline urate. Operating upon the same urine this amorphous urate may be obtained three times successively. Thus the uric acid on becoming dissolved, ceases to be uric acid, but becomes an urate, probably of soda, and the phosphates, deprived of part of their base, have passed into the state of acid salts. It is not, therefore, correct to say that uric acid is dissolved by the phosphates or other salts with alkaline bases; it merely becomes so by the combinations which it forms.

Sources of the Production of Uric Acid.

The nitrogen, which enters so largely into the composition of uric acid, indicates to some extent the sources from which it proceeds.

One of its chief sources is in the disintegration of the *nitrogenous tissues* of the body. According to Prout, it results from the disintegration of the *albuminous* tissues only. Liebeg, on the other hand, considers that it is the immediate product of the conversion of all nitrogenous tissue, and that *urea is a secondary product, arising from the action of oxygen and water upon the uric acid.*

Another source is the mal-assimilation of nitrogenous articles of food.

Again, there is reason to believe that excess of uric acid is sometimes formed where more nitrogenous food is consumed than is required to supply the waste of tissue.

Lastly, where the functions of the skin are impaired, so that the escape of the usual nitrogenous excretion is impeded, an increased amount of uric acid makes its appearance in the urine.

The composition of uric acid also furnishes a clue to the pathological conditions in which this product is either in excess in the urine or is deficient.

Conditions in which Uric Acid exists in the Urine.

It has been stated that uric acid occurs in the urine in one of two states, either free or combined, and by far the most frequently it is present chiefly in the latter state—that is, united with bases, and forming urine.

Until recently, the opinion was entertained by even the highest chemical and practical authorities on the urine, that the base with which the uric acid was combined was almost invariably *ammonia*. Amongst those who held this opinion in this country may be mentioned Prout, Bence Jones, and Bird.

Prout thought that two lithates of ammonia existed normally in the urine: one of them he termed the acid lithate of ammonia, attributing the acidity of the urine to it.

Dr. Jones[*] thus expresses himself in regard to the state in which the uric acid exists in the urine:—

"In the twenty-seventh volume of the 'Medico-Chirurgical Transactions,' there is a paper on the state in which the uric acid exists in the urine. The conclusions at which I arrived were that the uric acid is combined with *ammonia;* but that the urate of ammonia is modified in form and in solubility by the presence of common salt, and by other saline substances which exist in it."

At p. 83 of the fourth edition of Bird's "Urinary Deposits," we meet with these remarks:—

"The deposits most frequently occurring in the urine on cooling, by evaporation in vacuo, or exposure to a freezing mixture, are, however, neither crystalline nor composed of uric acid alone. They consist of urate of ammonia, sometimes mixed with urate of soda or lime, more or less contaminated with colouring matter."

The views entertained by Lehmann respecting the composition of the urates are much more correct. He distinctly asserts that what is usually described as urate of ammonia, is indeed urate of soda; and in his "Chemistry"* we find the following observations in relation to this point:—

---

[*] Traité de Chemie Anatomique et Pathologique.

[†] Ueber die Harnsauren Sedimente. Arch für Anat. und Physiol. Von J. Muller, 1845, p. 244.

[*] Lectures on Animal Chemistry.

"The sediment which is deposited from acid urine in fever, and in almost all diseases accompanied with fever, has long been misunderstood in reference to its chemical composition. Originally it was regarded as a precipitate of amorphous acid, and subsequently (and almost to the present time) it was regarded as urate of ammonia. It has, however, been fully demonstrated, both by myself† and Heintz,‡ that this sediment consists of urate of soda, mixed with very small quantities of urate of lime and urate of magnesia.

"It would be both superfluous and wearisome to recapitulate the arguments adduced by Becquerel, myself, and Heintz, against the opinion of Bird, who maintains that this sediment is always urate of ammonia, as the actual nature of the deposit has been so completely established. I will here only remark that, as I long ago found, and as Liebig has since confirmed, scarcely any ammonia occurs in urine; and that, according to the direct analysis of the sediment made by Heintz, scarcely 1% of ammonia could be found in it."

Farther on (p. 216), Lehmann proceeds to observe—"Even in alkaline urine it is very seldom that urate of ammonia occurs as a sediment; in those cases it is found in white opaque granules, which, as has been already stated, when seen under the microscope, appear as dark globules, studded with a few acicular crystals. It scarcely ever occurs except in urine which, by long exposure to the air, has undergone the alkaline fermentation. Even in the alkaline urine of patients with paralysis of the bladder dependent upon spinal disease, it is very rarely that I have found these clusters of the urate of ammonia; and in the alkaline urine which is sometimes passed in other conditions of the system, it is never found."

The error pointed out regarding the composition of the urates pervades all the writings and reasonings of Prout, Bird, and Bence Jones. I first exposed it in my review of the fourth edition of Bird's "Urinary Deposits," published in the *British and Foreign Medico-Chirurgical Review* for July, 1853.

I then published the results of the quantitative analysis of five samples of urates. These analyses were made chiefly by Dr. Letheby, from specimens forwarded to him by myself, he being professionally employed for the purpose.

Analysis of First Specimen.

Colour—Bright *rose-red.*

Biurate of lime	61
" ammonia	13
" potash	Traces.
Moisture	19
Pink colouring matter (*uranide* or *murexide*)	7
	100

Analysis of Second Specimen.

Colour at first of a bright rose-red, losing part of its colour after being washed with cold water, and becoming of a foxy or yellowish-red tint.

Biurate of lime	70
" ammonia	9
Moisture	16
Colouring-matter	5
	100

Analysis of Third Specimen.

This urate, as it appeared when diffused through the urine, which was of a deep brown colour, was of a pale fawn tint; but when collected on the filter, it was of a light rose-pink. After some hours this colour disappeared, and the urate became of a greenish hue, to the eye resembling somewhat purulent matter. On submitting a portion of the urate in this state to examination with the microscope, it was seen that it had lost its usual granular form, and had become aggregated into small, globular, crystalline masses, of a very pale colour, and deliquescent appearance. The change of colour was, no doubt, in part attributable to the change in the form of the urate.

Biurate of potash	57·12
" lime	18·37
" ammonia	10·06
Moisture	11·74
Colouring matter and loss	2·71
	100·

Analysis of Fourth Specimen.

This urate was of a bright deep-pink colour, and was obtained from a urine having a specific gravity of 10·24, and which, on the evaporation of a few drops on a slip of glass, gave a crystalline crust of urea.

Biurate of potash	42·0
" lime	20·0
" ammonia	19·5
Moisture	10·0
Colouring matter and loss	8·5
	100·

Analysis of Fifth Specimen.

Colour, dull pink. The ash which resulted from the combustion of this was 12·5 per cent. It was strongly and permanently alkaline, and tinged the flame of the blow-pipe of a full *yellow* colour, from which it is manifest that it consisted in great part of soda. The acetic solution was made slightly turbid by oxalate of ammonia, showing that it also contained lime. Distilled with potash, ammonia was detected. This specimen consisted in part of urate of soda, but it contained likewise a small quantity of urate of lime, and probably also of urate of ammonia.

It has now been proved that the deposits considered so generally to consist principally of urate of ammonia have a variable composition, being made up of the urates of lime, potash, and soda, with very small quantities only of ammonia. From the very great difficulty which is experienced in freeing these deposits from urea, it may be questioned whether the ammonia is not derived, in some cases at least, from the decomposition of that substance.

---

* Physiological Chemistry. Translation by Day, p. 214.
† Jahresber. d. Phys. Ch., 1844.
‡ Muller's Archiv, 1848, pp. 230, 261.

The conclusions of Heintz and Lehmann are therefore correct, so far as the ammonia is concerned. The chief differences in the results of our investigations and those of the observers mentioned are, that while we have found these deposits to consist in many cases almost entirely either of urates of lime, potash, or soda, or of all these combined in various proportions, Lehmann and Heintz found that they were composed chiefly of urate of soda, with very small quantities of the urates of lime, potash, and magnesia, and scarcely any ammonia.

The deposits of urates as met with in the urine are, then, neither formed, as was generally supposed, of urate of ammonia, or, as Heintz and Lehmann have stated, of urate of soda, but usually consist of two, three, or more salts of uric acid, mixed together in different proportions. Hitherto we have spoken of these urates collectively; I shall now proceed to treat of them separately, and a little more in detail. The urates which have been detected in the urine are, the neutral urate of soda, the acid urate of soda, urate of potass, urate of ammonia, urate of lime, and urate of magnesia.

Potash and soda, according to Lehmann, are the only bases with which uric acid forms neutral salts; with ammonia, and all other bases it forms only acid salts.

Neutral Urate of Soda.

This urate is very frequently encountered in the urine. It occurs normally in the urine of the carnivora, in calculi, and in the pulverulent deposits of the urine, also in the peri-articular concretions of the gouty. It likewise occurs in great abundance in the urine of persons subjected to treatment with alkaline waters containing soda. It is this salt which is so abundant in the blood of those labouring under attacks of gout.

MM. Robin and Verdeil state,[*] on the authority of Heintz, that the deposit which occurs in fevers and in maladies accompanied by inflammatory fever, is formed almost entirely of urate of soda and a little urate of lime, with traces of urate of ammonia.

The neutral urate of soda occurs usually in the urine in a granular or pulverulent state, but sometimes also in the form of minute and compact spherules, mostly single, but sometimes neutral; united, each spherule being formed of numerous needle-like crystals, which, however, can only be occasionally detected by reason of the compactness of the spherules.

We find in Bird's "Urinary Deposits"[*] the following remarks in regard to this salt. After treating of urate of ammonia, he observes:—

"Of the other salts of uric acid, the urate of soda is the only one I have satisfactorily recognised forming a distinct deposit. It occurs occasionally in gout, but I have more generally met with it in the urine of persons labouring under fever, who were treated with carbonate of soda. It then occurs in round yellowish or white opaque masses, provided with projecting, generally curved, processes, forming a very remarkable figure. Varieties of this more confusedly crystalline are less infrequent."

In the herbivora, the presence of urate of soda is either only temporary, or it occurs incidentally. Thus it disappears when the urine becomes alkaline, as at the period of weaning, and when the animal is nourished upon vegetables.

There is no known process by which the neutral urate of soda can be separated and isolated from the other urates. To establish its presence in any urate, this must be separated from the urine, well washed, and the quantities of uric acid and of the bases determined in the manner ordinarily practised by chemists.

Urate of soda always exists in the blood, its quantity being greatly augmented in gout, especially during the paroxysm. It may be detected in the blood by the following process:—The serum must be dried, treated with alcohol, the residue drenched with four or five portions of water successively; the aqueous infusions are then to be evaporated to the consistence of an extract. A portion of this extract treated with nitric acid, and exposed to the vapour of ammonia, gives the characteristic red tint of murexide; the remainder of the extract treated with hydrochloric acid furnishes crystals of uric acid. From the serum of the blood treated in the same manner, but not acidulated, crystals of urate of soda become deposited in great quantity.

Acid or Biurate of Soda.

The acid urate of soda is likewise a normal constituent of most acid urines; it sometimes, though not frequently, occurs in a crystalline state in the ordinary pulverulent deposit of the mixed urates.

The crystals occur, according to MM. Robin and Verdeil, who in particular have described this salt, in the form of little groups of from eight to fifteen needles of very small dimensions, yellowish or brownish, straight or a little curved, simply crossing each other, or disposed upon a little granulation or central globule. "We do not find," remark MM. Robin and Verdeil,[†] "any other salt which presents this aspect in urines which have not been subjected to any physical or chemical agency. It is this mode of crystallization, very different from the compound grouping of little needles of the neutral urate of soda, which distinguishes these two principles, the one from the other. In the analyses these two principles have always been confounded."

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[*] Loc. cit. p. [illegible].

[*] Fifth Edition, p. 148. Edited by Dr. Birkett.

[†] Loc. cit. p. 451.

The acid urate of soda is one of the first salts to become deposited on the evaporation of the urine. It is deposited at the same time with the urates of soda and ammonia, and phosphate of lime. While these salts form ovoid or spherical grains, this, as already described, is deposited in spherical masses of much larger size, formed of needle-like crystals, united together strongly, and easily visible to the naked eye when they are placed upon a piece of glass.

These masses, according to the description of MM. Robin and Verdeil, are opaque, black, or a little transparent, and then somewhat yellow. Their periphery is sometimes defined, the needles which form the little sphere are visible in its substance, as striæ radiated around a centre, but ordinarily some needles extend beyond the periphery. The most common disposition is that in which the surface of each sphere is rendered rough by the little points of the crystals which exceed more or less the circumference of the sphere. Sometimes this circumference is visible between the extremities of the needles as a defined border; at other times the margin is vague and diffused by reason of the number of points which issue from it. They are, of course, slowly dissolved by acetic acid, depositing crystals of uric acid.

Biurate of Potass.

MM. Robin and Verdeil state of this urate, that although it has been discovered in the urine and its sediments, it has been found only in small quantity. The analyses of urates which I have given already prove that this salt sometimes constitutes the chief part of the mixed pulverulent deposits of the urine.

It has been found in the urine where potash has been largely administered; it has also been met with as a constituent of calculi and in the concretions of gout.

I have observed it to occur in the urine as an amorphous product, in the form of globular shot-like spherules, resembling those of urate of soda, but more deliquescent and coherent. When artificially prepared, urate of potass likewise crystallises in little globular masses. Lehmann describes two urates of potash, the neutral and the acid or biurate.

Biurate of Ammonia.

I have already had occasion to observe that Prout, Bird, and Bence Jones, as well as many others, treat of the urates throughout their writings as formed almost entirely and constantly of urate of ammonia. This I have shown to be an error, and that the urates which occur by far the most frequently in the urine are the urates of lime and soda. Nevertheless, urate of ammonia is occasionally present, generally in small amount; but instances are recorded of the occurrence of urate composed in part, or even entirely, of urate of ammonia.

Urate of ammonia, pure and unmixed, and as deposited from boiling water, crystallizes in long, delicate, colourless needle-shaped crystals; but Heintz has shown that when mixed with other alkaline urates it does not crystallize at all, but, like the other mixed urates excepting only the acid urates of soda, it assumes the granular or pulverulent state. An excellent figure of this urate is given by MM. Robin and Verdeil in their Atlas, Table 18, Fig. 1.

Biurate of Lime.

Another urate which is frequently met with, entering largely into the composition of urinary deposits, is urate of lime. It has been found, though somewhat rarely and in small quantity, in certain urinary calculi, especially the phosphatic; more frequently it has been detected in phosphatic deposits. M. Leroy (d'Etiolles) has found that it exists frequently with carbonate of lime and urate of soda in calculi which form in persons subjected to treatment with alkaline waters. From this observation it might be inferred that urate of lime occurred chiefly in alkaline urines. This does not at all accord with my own experience; the two urates, the analyses of which have already been given, and which were ascertained to consist chiefly of urate of lime, were both obtained from very acid urines.

When pure, it crystallizes in little round yellow grains, with well-marked borders or margins. Herapath found as much as 14 parts in 100 of this urate in a gouty concretion.

Biurate of Magnesia.

The last urate found in the urine is urate of magnesia. This is of very common occurrence, as might have been expected when the constant presence of magnesia, even in large quantity, in the urine is remembered.

In calculi it has been found combined with either uric acid, ammonio-magnesian phospate, phosphate of lime, or urate of ammonia. In one case a calculus has been met with formed entirely of urate of magnesia.

When urate of magnesia is dissolved in hot water, it becomes precipitated from its solution in a crystallized form as the water becomes cold. These crystals are very distinct; they belong to the right rectangular system. It is rare to obtain them in their typical forms, although M. Samuel Bigelow has succeeded in procuring them in that condition. They are then always of a large size, and usually present two terminal facettes, are colourless, and effloresce in the air.

Ordinarily urate of magnesia crystallizes in rectangular crystals, which are usually long and sometimes so narrow as to become needle-shaped; these crystals do not interlace with each other, but lie side by side, frequently forming stellæ; they polarize light.

The preceding description of the crystals of urate of magnesia is taken in great part from the Treatise of MM. Robin and Verdeil, to which valuable work I am also indebted for many other particulars in relation to the urates. Excellent figures of this salt are given in the Atlas of these authors, tables 21 and 22.

For the atomic composition of the urates, consult Lehmann's "Physiological Chemistry."

Characters of Urine depositing free Uric Acid.

Urines depositing uric acid are usually somewhat high-coloured, possessing a deeper amber tint than natural, and being sometimes of a reddish brown colour; they are of considerable specific gravity, are always acid, and frequently contain such an excess of urea that, on the addition of nitric acid to a little of the urine in a watch-glass, crystallization obvious to the naked eye ensues, resulting from the formation of nitrate of urea.

The first situation in which uric acid may be deposited from the urine is in the lobules of the kidney. The crystals may be washed away from this situation by the urine; or, as frequently happens in cholera, they may be formed in the renal tubules in connexion with the escape of albumen, and be thrown off impacted in the albuminous casts; or, lastly, the uric acid crystals may accumulate in the lobules to such an extent as to form *renal* calculi.

The second situation in which uric acid may be deposited is in the bladder. After its precipitation in this viscus, it may be voided either wholly or in part as a sand-like deposit. When not wholly discharged, it is apt to accumulate in the bladder, giving rise to *vesical* calculi. The calculus may be either single, or a number of small calculi may be formed, and these may, and frequently do, escape by the urethra from time to time.

Lastly, and this is by far the most common occurrence, the uric acid is deposited from the urine after this has been voided, and as it becomes cold.

The uric acid, even when in excess in any urine, does not become deposited immediately, but as many as twenty-four and even forty-eight hours are required for its precipitation. This is also the case when hydrochloric acid has been added to the urine for the purpose of aiding its deposition. It has been observed that a considerable time is required for the subsidence of the acid where the urine is alkaline, and in cases of gout.

Neither does the urine deposit spontaneously the whole of the uric acid contained in it. This is shown by the fact that, after the removal of the natural deposit, and subsequent addition of a few drops of hydrochloric or nitric acid, a further quantity of uric acid crystals is thrown down. Decomposition has the same effect in causing the precipitation of the uric acid as the addition of an acid.

The principal circumstances to the operation of which the precipitation of uric acid is to be attributed, have already been noticed.

Microscopical Characters of Free Uric Acid.

Free uric acid occurs in the urine chiefly as a deposit, and is always in the state of crystals; these crystals form a sand-like sediment, more or less fine or coarse, and more or less coloured; in general, the higher the colour of the urine, the deeper that of the crystals.

Uric acid crystals vary greatly; they may be pale-fawn, yellow, deep amber, orange, red, and even of a reddish-brown or black colour, like burnt sienna. This last colour is observed particularly when the uric acid has been precipitated artificially by means of hydrochloric or nitric acid. According to their colour are deposits of uric acid likened to either *yellow* or *red* sand.

MM. Robin and Verdeil* consider that the variations of colour presented by crystals of uric acid are independent of the colouring matter of the urine. "The form of the crystals and the intensity of their coloration differ according as we employ a great or small quantity of acid proportionally to the quantity of urine, and according as we add this or that acid. These facts and others show that we ought not to refer the coloration of the crystals of uric acid to colouring matters which this principle carries with it in becoming deposited, as some authors are led to believe. These crystals are, in fact, much more homogeneous than most of the crystalline solids which carry down with them organic substances as they become deposited, and it is, moreover, salts which have this peculiarity.

"These variations of colour appear due to different modifications of molecular aggregation joined to the conditions in which the crystal is deposited, peculiarities of which many chemical compounds offer examples."

The normal or typical form of the crystals of uric acid is the rhombic prism.

This form is subject to every possible and conceivable variation of outline, the variations being rendered the more striking in consequence of great differences in the size and thickness of the crystals.

Occasionally the crystals appear nucleated, more rarely one crystal appears to include another.

Sometimes the crystals are nearly square; at others, diamond-shaped; sometimes the angles are more or less produced, or rounded. In one or two instances I have met with imperfectly-formed or half crystals of uric acid.

The following interesting remarks respecting the *square* crystals are contained in Dr. Golding Bird's "Urinary Deposits." It is there stated, that when the deposit has been of long continuance, especially in cases of calculous disease, the rhomboidal outline of the crystal is replaced by a square one. The deposit is then generally high-coloured, and the crystals thick.

A very curious modification is that in which the obtuse edges are rounded, the margin above and below being excavated; the crystals then appear spindle-shaped, or have an outline somewhat resembling a fleur-de-lis.

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* Traité de Chemie Anatomique et Pathologique, p. [illegible].

An interesting variety in the form of the crystal of uric acid is that in which the crystals are of an hexagonal form. This variety occurs chiefly in the urine of young children.

It has already been remarked, that one source of variation in the crystals is occasioned by their variable thickness; sometimes they are thin and transparent; at others they are much thicker, and sometimes the prism is so much prolonged, that the crystals lie upon their sides in place of their faces; they then appear *tubular*, resembling flattened cylinders, slightly excavated at the sides. When an end view of these crystals is obtained, which by agitation may be readily effected, their lozenge-shape, or rhomboidal form, becomes apparent. Dr. Bird states that this variety often occurs mixed with urate and oxalate of lime.

There is another modification of rather frequent occurrence resembling somewhat the preceding. In this the crystals are larger; they are also thick, but square rather than tubular, their peculiarity consisting in the obliquity of the crystals.

A tendency which the crystals of uric acid very frequently exhibit is to attach themselves to any hairs or threads with which they may happen to come in contact, just as sugar-candy crystallizes on a string. Dr. Garrod has availed himself of this circumstance in order to separate uric acid from the serum of the blood.

Another tendency frequently exhibited is for the crystals to unite together so as to form *compound crystals* or masses, the crystals lying across each other more or less at right angles, being joined together in the centre, and free at the extremities; thus forming glomeruli or rosettes, many of which form extremely beautiful microscopic objects. The coarse and deep-coloured uric acid deposits are usually composed of these cohering and compound crystals, which may, in fact, be compared to minute calculi.

Another curious modification of the uriatic crystals is that in which they present a striated appearance, as though each was compounded of numerous small linear crystals. These crystals occur occasionally, though rarely, as a natural deposit; but they are more frequently produced by adding nitric or hydrochloric acid to about an ounce of urine, when, after a few hours, these crystals become deposited. Not unfrequently these striated crystals present a peculiar hour-glass formation in the centre, the nature of which has given rise to a good deal of discussion. This hour-glass appearance is only visible in the non-striated part of the crystal, and, according to Bird, is most clearly seen after the crystals have been dried and preserved in Canada balsam. Dr. Burton regards these striated crystals as being formed of two rhomboidal crystals placed end to end, and then covered up with an aggregation of acicular crystals. Although this explanation may be correct as respects the hour-glass formation, it does not explain the nature of those crystals, not unfreqently met with, which are simply striated, and which do not present any hour-glass formation. These striated crystals are in many cases, simple rhomboidal crystals, exhibiting a tendency to split up into aciculi.

To this compound variety of the crystals of uric acid ought to be referred the "*fusiform*" concretions of Golding Bird, in regard to which we find these observations at page 142 of Dr. Birkett's edition of Bird's "Urinary Deposits":—

"Another variety of uric acid deposit is exceedingly common in gouty persons. It occurs in little spherical masses of a pale yellow colour, varying in size from that of small millet-seeds to that of a large pea, which ought, indeed, to be referred to the class of calculi rather than of deposits.

"This fusiform deposit is remarkable for its persistence often during many years; it frequently vanishes for many months, and then reappears. I have generally observed the patient to remain free from gout during the presence of this deposit, and often to suffer from a severe paroxysm on its sudden disappearance. It is really remarkable what an enormous number of these minute calculi are frequently passed. I have met with cases in which upwards of two hundred, the size and colour of small mustard-seeds, have been passed in two days.

"These fusiform concretions, after a few minutes' digestion in weak nitric acid, undergo a curious change, their crystalline structure becoming visible, presenting the appearance of numerous acute rhomboids, diverging from a common centre. It is evident that they, at their first formation, possess this form, the rounded smooth surface being subsequently produced by the deposition of minute crystals of uric acid, or the urates between the projecting angles."

Dumb-bell crystals of uric acid have been described by some authors; they are rarely met with in human urine as a natural deposit, but they may be procured artificially by passing a warm solution of urate of potassa or ammonia into a warm dilute solution of hydrochloric acid.

Lastly, crystals of uric acid, formed by adding acetic acid to a urate on a slip of glass, are sometimes seen to be imperfect—that is, one-half such crystal only is formed, the remainder being absent.

When viewed by *polarized light*, thin transparent crystals of uric acid exhibit a series of coloured bands, equalled in brilliancy of tint only by the scales of the diamond beetle.

We thus perceive that the microscope is capable of affording a large amount of valuable information in regard to deposits of uric acid, as well as, indeed, almost every other substance encountered in the urine. A mere glance with the microscope will show whether the crystals under observation consist of uric acid or not. The following remarks by a recent writer on urinary affections are therefore somewhat amusing:—"In judging of the nature of the deposit from the microscopic crystals in the urine, some care is requisite. You will come to all kinds of false conclusions, unless, whenever it is possible, you collect a sufficient quantity of the sediment to examine it chemically."

The circumstances which modify the form and arrangement of the crystals of uric acid are the quantity of acid present in the urine, the temperature, acidity, and alkalinity, the specific gravity, and the composition of the urine. The exact effects of these several modifying causes and conditions have not as yet been fully and accurately determined.

It has already been stated that the precipitation of uric acid and the urates is determined by the three following causes, acting either separately or conjointly; namely, increased proportion of uric acid and urates to the urine, increased acidity of the urine, and diminished temperature.

It should be remembered, however, that the mere precipitation of uric acid or urates is no proof of the excess of these in the urine; as the precipitation may be due solely to increased acidity. Again, there may be an excess of urates, yet no precipitate, owing to the absence of acidity, or even to the alkalescence of the urine. When urates are deposited and not uric acid, the acidity of the urine is usually not considerable.

It is very probable that a knowledge of the several circumstances which modify the form, size, and arrangement of the crystals of uric acid might lead to some useful practical results, and might possibly serve to indicate particular pathological conditions of the urine.

It is, however, certain that many of the modifications of uric acid crystals, as well as those of many other salts, are determined by very slight and trivial causes. This is shown by the fact that several different forms of the crystals of the same substance or salt may frequently be obtained by the evaporation of a single drop of the solution containing it on a slip of glass. Again, Dr. Smidt has shown that variations in the rapidity and manner of the precipitation of the uric acid greatly modify the result. Thus by the precipitation of uric acid from solutions of urate of potass by means of acetic acid, more or less rapidly, the solutions being more or less heated, crystals of uric acid may be obtained, some of which are oval, some diamond-shaped, some hexagonal, others in rectangular columns and tables, and others in rhombic prisms.

We now pass on from uric acid to treat of the

URATES.

Characters of Urine depositing Urates.

The variations in the colour of the urates deposited correspond with certain descriptions of urine.

The urine depositing the nearly *white* urates is pale and of low specific gravity, about 1010 to 1014. Moreover, these urates do not readily subside, but remain suspended like clouds in the fluid, presenting in some cases, as remarked by Golding Bird, the appearance of muco-pus, for which indeed not unfrequently they have been mistaken.

The urine depositing the *fawn*-coloured urates is usually of an amber colour, and of higher specific gravity, namely, about 1018. This deposit is a frequent attendent upon colds, in which the action of the skin has been impeded.

The urine from which the red, lateritious, or *brick-dust* sediment is thrown down, is of a still deeper colour and higher specific gravity.

Lastly, the urine from which the brilliant purple and bright pink sediments are precipitated is always highly coloured and of high specific gravity, it being often of a deep purple verging on crimson, and conveying the impression of blood being present.

These purple deposits occur especially where great obstruction exists to the elimination of carbon from the system, as in organic diseases of the liver and spleen, and where extensive suppuration is going on.

As is the case with uric acid, the quantity of urate spontaneously deposited from any urine, does not always indicate the whole amount of urate contained in that urine. If the urine be decidedly acid, an abundant deposit of urate will occur, even when the quantity present is not considerable; but if the urine be but little acid or alkaline, then much of the urate will be held dissolved.

Physical and Microscopical Characters of the Urates.

Deposits of urates, like those of uric acid, vary greatly in colour, being sometimes nearly colourless, or *white*, at others, pale *fawn*, *red*, and even *purple*. The tints of these deposits are best seen after the urine has been separated from them, as when collected on a filter.

Deposits of urates seldom occur in a crystalline form, but usually as *granular amorphous* powders. Dr. Golding Bird has described these powders as consisting "of myriads of excessively minute globules adhering together, forming little linear masses." It is but very rarely that the granules present the linear disposition described by Dr. Bird; almost constantly the granules are scattered, without order or arrangement, throughout the urine.

Although the urates, especially when mixed, do not often occur in a crystallized condition, yet they are sometimes met with in that state, as already pointed out under the descriptions given of the several urates discovered in the urine.

Thus, the *acid* or *biurate of soda* has been detected in the form of needle-shaped crystals, frequently arranged in tufts or spherules. (See description.)

The *neutral urate of soda* is frequently encountered in the urines, especially when these have become alkaline, in the form of minute shot-like *spherules, resembling mustard-seeds.*

The *urate of potass* is met with in the same globular state, the globules being more deliquescent than those of the soda salt.

Biurate of magnesia, when pure and unmixed, also crystallizes, in a very characteristic manner.

(See description.) It has not, however, been detected in the urine of man in the state of crystals.

The globular shot-like masses of these urates, or soda and potassa, although usually separate, sometimes coalesce; when carefully examined with the one-eight inch object-glass, they are occasionally seen to exhibit a radiated or stellar character, it being obvious that the spherules are made of numerous needle-like crystals. In some rare cases I have noticed the globules to unite in twos, forming *dumb-bells.*

These globules occur in large quantities in urines which have been kept for some weeks, and which have thus become alkaline. If a urine containing a large amount of amorphous urate be put aside for a time, and be then examined, the urate will frequently be found to have passed into the globular form.

Very rarely spherules of urate have been observed penetrated by crystals of uric acid. This form has been particularly described by Dr. Bird. It is in albuminous urine occuring in dropsy after scarlet fever that it is occasionally detected.

Another modification has been noticed by Dr. Bird and others, which somewhat resembles that previously described; it occurs in round, yellowish, white opaque masses, provided with projecting and generally curved processes. These crystalline formations, there is little doubt, consist of urate of soda; they occur occasionally in gout, but Dr. Bird states that he has more generally met with them in the urine of persons labouring under fever, who have had carbonate of soda administered to them.

No satisfactory instance of the occurrence in human urine of a crystalline deposit of urate of ammonia has been observed, although it is met with in abundance in the urinary excretions of birds and reptiles, forming roundish bodies presenting a radiated arrangement, being composed of numerous cohering needle-like crystals.

It thus appears that the physical and microscopical character of uric acid and the urates are particularly well-marked; their *chemical* peculiarities are scarcely less satisfactory.

[We had intended to have illustrated this article with a variety of engravings, some of which we have even had prepared, showing the chief variations in the form of the crystals of uric acid, but find that they would occupy too much space.]

Chemical Characteristics of Uric Acid and the Urates.

Of Uric Acid.—Heated in the urine, uric acid deposits do not dissolve, but usually become more clear from the solution of the urates with which they are frequently more or less mixed. It readily burns, evolving an odour resembling bitter almonds, and leaving a small quantity of a white ash, consisting generally of phosphate of soda or lime, or both. It is soluble with the aid of heat in solution of potash, a urate of potash being formed; it also dissolves readily in the alkaline carbonates, borates, phosphates, lactates, and acetates, abstracting some of the alkali from these salts. It is precipitated from its solution in the urine, whether it be free or combined, by hydrochloric, acetic, and most other acids. It readily dissolves in nitric acid, furnishing a delicate and characteristic test. When a drop or two of strong nitric acid are added to uric acid in a state of powder, it slowly dissolves with effervescence, carbonic acid gas and nitrogen being evolved, and a mixture of alloxan, alloxantine, and some other compounds, being left behind. On the evaporation of the acid to dryness, and the application of a gentle heat, a red residue is left, which, when cold and moistened with a drop or two of ammonia, or exposed to its fumes, developes a beautiful purple colour. This pigment is the purpurate of ammonia of Prout, and the *murexide* of Liebig.

Submitted to dry distillation, uric acid is converted into *urea,* cyanic acid, cyanide, hydrocyanic acid, and a little carbonate of ammonia, a brownish-black substance, rich in nitrogen, being left.

On boiling uric acid with twenty parts of water, and adding peroxide of lead as long as the brown colour of the oxide continues to disappear, there are formed *oxalate* of lead, *urea,* and *allantoine.* Treated with dilute nitric acid, it dissolves with considerable readiness, developing equal parts of nitrogen and carbonic acid, and giving rise to the formation of several compounds.

The decomposition of uric acid by reagents gives rise to the formation of a great variety of organic substances of great interest, but of which we shall only notice the more important. We have already referred to some of the circumstances under which urea, oxalic acid, and allantoine occur as products of the decomposition of uric acid; other products are *alloxan, oxaluric acid,* which may be regarded as a combination of two atoms of oxalic acid, with one atom of urea, *alloxantine,* and *murexide.*

It appears from the recent experiments of Wohler and Frerichs that the introduction of uric acid into the stomach or the veins is followed by an increase in the amount of urea and oxalate of lime in the urine; this result affords tolerably strong evidence that the uric acid undergoes, in many cases, in the organism, a decomposition into urea and oxalic acid, similar to that artificially produced by peroxide of lead.

Of the Urates.—The urates are distinguished from all other urinary deposits by becoming dissolved on the urine containing them being heated, and by their being again deposited as this becomes cold; the deep-coloured urates require a somewhat higher temperature for their solution than the paler varieties; liquor potassæ or ammonia immediately dissolves these deposits, while acetate and hydrochloric acid causes the separation of the uric acid, which becomes visible under the microscope in the form of crystals.

THE PATHOLOGY OF URIC ACID.

It has already been stated, that the principal sources of the production of uric acid are, first, the disintegration or waste of the nitrogenized tissues of the body; and, second, the nitrogenous constituents of the food consumed. These facts furnish us with the key to the pathology of uric acid.

The principle may either be in excess in the blood or urine, or it may deficient.

It is in excess—

1st. Where there is abnormal waste of the nitrogenized tissues.

This occurs under excessive bodily exercise, or wear and tear, in all diseases of a sthenic character, as in acute inflammations, active fevers, in acute rheumatism, in phthisis, and in most organic and even in some functional affections of organs which materially influence the circulation, as the heart and liver.

The remarks of Lehmann, respecting the increase of the urates from disturbed circulation, are of much interest.—

"We especially observe the formation of such sediments when, for any reason, the due interchange of the gases in the lungs does not take place, or when, from disturbance of the circulation, the blood does not really permeate the pulmonary vessels. Thus a sediment of this nature may be noticed in men and animals when there is an insufficiency of proper exercise. Carnivorous animals, which in their natural state secrete so little uric acid after long confinement, frequently pass a sedimentary urine, especially when they have been reared in cages, and have been attacked with osteo-malacia. In fully-developed emphysema, or even when only a part of the lung has lost some of its elasticity, a sedimentary urine is one of the most common symptoms. Heart disease, enlargement of the liver, &c., are associated with disturbance of the circulation, and hence give rise to sedimentary urine. Large masses of secreted urate of soda are found in no disease except in true granular liver, which obviously can never exist without considerable disturbance of the circulation. In fever also, the due relation between the respiration and circulation is no longer maintained, and hence there is an augmentation of the uric acid in the urine; for none but mere chemists could be led to the erroneous idea that in fever too much oxygen is conveyed to the blood—in short, that fever is attended with too rapid a process of oxidation."

With regard to the reason of the increase, Lehmann makes these observations: "Now if the urea," as is very probable, "be produced from the uric acid by the partial oxydation of the latter, anything impeding this process must cause less urea and more uric acid to be separted by the kidneys, and hence we see why the amount of uric acid in the urine must be increased in fevers, and other disturbances in the circulation and respiration. We have seen that in like states, oxalate of lime and lactic acid increase, for a precisely similar reason; and without wishing to introduce rude chemical views into the science of general life, nothing seems more simple, and more in accordance with nature, than this explanation of the origin and augmentation of uric acid. We regard uric acid as a substance which stands one degree higher in the scale of the descending metamorphosis of matter than urea.

The influence of active disease in increasing the amount of uric acid in the urine has been most conclusively demonstrated by the researches of MM. Becquerel and L'Heretier. From the average of eleven cases of acute inflammatory diseases observed by M. Becquerel, and twelve of continued fever on the fifteenth day by M. L'Heretier, it appeared that the quantity of uric acid excreted was more than double the average of that of healthy urine:—

	Acute Inflammation.	Fever.	Health.
Specific gravity of urine,	1·0216	1·0229	1 017
Uric acid, ...	1·041	1·312	0·391

There is excess—

2nd. Where a greater quantity of nitrogenous food is consumed than is required to make up the waste of tissue.

This excess is met with in cases of over-indulgence in animal food, or where the quantity of food partaken of not being greatly in excess, too little bodily exercise is taken, and consequently there is diminished waste of the nitrogenized tissues. The effect of *food* in influencing the amount of uric acid excreted has been shown by Lehman and Bence Jones.

While living on a mixed diet, Lehmann discharged on an average 1·1 gramme of uric acid in twenty-four hours; while during a strictly animal and a strictly vegetable diet the respective amounts were 1·4 1·0 grammes.

Jones has proved that a few hours after food, whether vegetable or animal, the amount of uric acid is increased; but that long after all food it is greatly diminished. This is shown in the following table:—

	1000 grs. of uric. acid.	Urine. sp. grav.
After animal food, highest amount,	1·022 grs.	1027·8
After vegetable food, " . .	1·010 "	1025·6
Before animal food, lowest amount,	0·049 "	1024·8
Before vegetable food, " . .	9·049 "	1024·0

From these results it is obvious that the nature of the food exerts far less influence on the amount of the uric acid formed than on that of the urea.

It is in excess—

3rd. When there is defective or mal-assimilation of the food, as in many forms of dyspepsia.

The effect of disturbed and imperfect digestion is particularly well shown by Lehmann.

"Thus," he states, "I have observed both in myself and in several other persons, that if indigestible food or spirituous liquors, not sufficiently spiced, be taken before bedtime, the morning urine always deposited a considerable sediment. While in the normal state, the ratio of the uric acid to the urea = 1 : 28 to 30, I found that in urine passed after indigestion, the ratio = 1 : 23 to 26; and that the ratio of the uric acid to the other solid constituents, which is ordinarily about = 1 : 60, was now = 1 : 4 + 1 to 52, so that the amount of uric acid is here not only increased at the expense of the urea, but also at that of the other solid constituents of the urine. In the most marked case I found in 100 parts of solid residue 2·4 of uric acid, 35·2 of urea, and 62·4 of other solid constituents; hence the latter were absolutely increased in the urine.

The excess of uric acid first formed in the blood, and afterwards eliminated by the kidneys in acute *rheumatism* and *gout*, has probably a double origin; on the one part in excessive waste of the tissues, and on the other, and chiefly, in mal-assimilation of the nitrogenous constituents of the food.

In the blood, this excess of uric acid exists in combination usually with soda, and being scarcely held in solution by the serum of the blood, and not finding its escape readily enough by the kidneys, it, exuding from the bloodvessels, becomes deposited around the joints of the extremities.

Dr. Garrod has found that there is a constant and well-marked diminution of the uric acid in the urine before the paroxysm in acute gout, and always in chronic gout; while, on the other hand, in rheumatism, especially in acute articular rheumatism, the amount of uric acid in the urine is very much increased.

There is excess—

4th. Where the excretory function of the skin is impaired; as from checked perspiration arising from cold and from different forms of skin affections.

It has been ascertained by various experiments, that a *large* amount of nitrogenous substances are *daily* thrown off by the skin in health. Seguin showed that thirty-three ounces of solid matter on an average were eliminated in the twenty-four hours, a quantity nearly equal to that of the urine. Anselmino ascertained that the cutaneous exhalation thrown off in the twenty-four hours contained 107·47 grains of organic matter, and 81·92 grains of saline matter, the rest being volatile matter and water.

The composition of the cutaneous organic matter has not been accurately determined. According to Landerer, urea forms one of its constituents, while Berzelius states that it contains osmazene. Very probably, also, uric acid is not an unfrequent constituent. The functions of the skin being impaired, the urine forms the chief outlet by which this large amount of organic matter becomes excreted; some portions of it in the forms of urea and possibly uric acid.

"Fourcroy found that the urine contains more uric acid in winter than in summer. Marcet formed the conclusion that the uric acid diminishes in the urine after severe perspiration. Schultens found that, in Holland, where, in consequence of the great humidity of the atmosphere, the cutaneous transpuration is diminished, the amount of uric acid varied from 0·21 to 0·67‡. For a similar reason, in tropical countries lithiasis is almost unknown." (Lehmann.)

We now come to consider the pathological conditions in which there is *a deficiency of uric acid.* For the most part, these are the very reverse of those already described, and which occasion an increase of that principle in the urine. Thus uric acid is deficient—

1st. Where there is diminished waste of tissue.

2nd. Where the supply of nitrogenous food is restricted.

3rd. Where the food consumed is well assimilated.

4th. Where the amount of organic matter eliminated by the skin is in excess.

There is deficiency, then, of uric acid in all diseases of debility, independent of active disease, as in anæmia and chlorosis, in debility produced by losses of blood, and in many hysterical and neuralgic affections.

The average quantity of uric acid found in the urine by Becquerel and Bird, in certain cases of chlorosis, melena, irritable uterus, and spermatorrhœa, was 0·184 of a grain in 1000 parts, being less than one-half the normal proportion.

It must not be forgotten that for the due elimination of the uric acid by the kidneys, those organs must be in a state of integrity; indeed, this remark applies equally to most of the other constituents of the urine, as well as to uric acid. If the kidneys be affected with granular disease, their eliminative functions will of course be impaired, and part of the excess of uric acid will thus be retained in the blood. Again, it should be remembered that in congestion of the kidneys produced by local causes, such as blows and strains, it is stated that uric acid is in excess in the urine.

The following Table, extracted from Bird's "Urinary Deposits," exhibits the actual quantity of uric acid and urea excreted in twenty-four hours in several diseases. It was compiled by Dr. Bird from the analysis of M. Becquerel:—

	QUANTITY IN TWENTY-FOUR HOURS.		
	Uric Acid.	Urea.	Ratio of Uric Acid to Urea.
	Grains.	Grains.	
Healthy urine (Becquerel's average) .	8·1	255.0	1 : 31·48
Chlorosis, minimum in 5 cases	1·8	77·5	1 : 43.00
Chlorosis, maximum in 5 cases	6·	172·0	1 : 29·00
Pulmonary emphysema (extensive dyspnœa)	4·9	172·0	1 : 35·10
Phthisis (tubercles softened)	9·1	66·7	1 : 7·33
Phthisis (3 days before death)	9·8	29·4	1 : 3·00
Morbus cordis, with icterus	9·32	72·3	1 : 7·60
Acute hepatitis, with icterus	11·18	61·6	1 : 5·60
Icterus	17·75	285·6	1 : 16·10
Milk fever	19·00	133·0	1 : 7·47

ON THE TREATMENT OF URIC ACID DEPOSITS.

The physician is more frequently called upon to treat affections connected with the presence of uric acid in the urine than any other urinary deposit, and this for several reasons; one of these is, that deposits of uric acid, either free or combined, are readily recognised, even by the patient himself; and a second reason is, that they frequently give rise, mechanically, to considerable irritation and pain in the kidneys, ureters, bladder, and urethra, causing the patient to seek for immediate relief.

The treatment admits of division into two kinds, the curative and the palliative: too frequently the treatment adopted is of the latter character only.

For the curative treatment it is necessary that we should ascertain the cause or source of the excess of uric acid.

It has already been shown that this may be in too rapid disintegration of tissue, in excess of animal food, in its mal-assimilation, and in defective cutaneous excretion.

The palliative treatment has for its object the solution of the uric acid deposit, whether this be in the kidney or the bladder, the distressing mechanical effects being thereby obviated.

Sometimes the only treatment required is the palliative, the excess of uric acid being due to temporary causes only, and treatment being needed solely on account of the irritation produced by the deposit.

Sometimes treatment is required for uric acid deposit even where there is no excess of it in the urine, the precipitate formed being due not to excess, but to over acidity of the urine.

Again, there may be excess of uric acid in the blood, producing constitutional derangement, with a deficiency of the acid in the urine, as in gout in some stages, and in structural diseases of the kidneys.

If the excess of uric acid be due to over waste of tissue, this must be moderated. The waste may arise, as already described, in various ways, from over exertion of the body, from inflammatory disorders, active fevers, diseases of the heart and liver, &c. In such cases we must lessen undue action, and regulate the circulation and secretions. When the liver is at fault, special attention must be paid to that organ.

If the excess of uric acid be due to over-indulgence in animal food, the obvious indication is to reduce the amount of this within proper limits.

If the excess be attributable to mal-assimilation, the quality and quantity of the diet must be regulated carefully, and the digestive organs improved and strengthened by alteratives and tonics.

Lastly, if the excess be traceable to defective cutaneous elimination, the first indication to be fulfilled is to restore the skin to a more perfect performance of its function.

In general, however, it is not advisable to confine our attention too exclusively to the cause of the excess; in our treatment of these affections generally we must have regard at once to the diet, the state of the digestive organs, of the skin, &c.

Attention to diet is most important. This comprises the regulation of the quality and quantity of the ingesta: too much nitrogenous food must be avoided, together with all such articles as tend to the production of too much acidity.

For the improvement of the digestive organs, not only must the diet be regulated, but alteratives and tonics administered. The administration of these have for their object the improvement of the primary assimilation of the food, whereby the entrance into the blood of crude nitrogenized and acid materials is prevented. The acids, the lactic and acetic, the products of unhealthy digestion, being absorbed into the circulation and conveyed to the kidneys, act as precipitants of uric acid.

When the liver is at fault, small doses of mercury must be administered; and if the digestion is weak, vegetable bitters should be given, such as cinchona, gentian, columba, and serpentary; the latter remedy is in some cases to be preferred, on account of its action on the skin. When gastrodynia exists, benefit will frequently be derived from the use of the trisnitrate of bismuth, oxide of silver, combined with hyoscyamus or hydrocyanic acid. The gastric symptoms being relieved, a very marked improvement frequently takes place in the character of the urine.

Some of the milder preparations of iron, as the ammoniocitrate or the citrate of quinine and iron will be found of great service, especially when, connected with mal-assimilation, an anæmic or chlorotic state exists. From three to five grains of either of the above-named preparations may be taken twice or thrice daily in a wine glass of water or beer, either with or directly after food. Taken with the food, these preparations are more readily absorbed, and agree better.

When there is reason to suspect that the deposit is kept up by a gouty or rheumatic tendency, *colchicum* will often be found to lessen in a very obvious manner the amount of uric acid deposited. The colchicum may be administered in combination with some of the solvent remedies presently to be described, and a little vegetable infusion, or the acetous extract of colchicum, may be used, combined or not, as may be necessary, with small doses of blue pill.

Scarcely less important than careful regulation of the diet is attention to *air*, *exercise*, and particularly to the action of the skin.

Air and exercise tend greatly to the improvement of all the bodily functions, and especially promote the healthy performance of digestion. Moderate exercise, by increasing the waste of the tissues, likewise calls the digestive organs into greater activity.

The action of the *skin* is promoted by warm clothing, by bathing, cold and warm, by friction, and sometimes by diaphoretics. In some cases, persistence in the use of cold bathing and friction of the skin by horse-hair gloves will be sufficient; in others, the warm or, better still, the vapour-bath, may be required, and in others James's or Dover's powders. It has already been noticed that serpentary exerts a diaphoretic action on the skin; benzoic acid, about which we shall have to speak presently, is also diaphoretic.

A great variety of solvent remedies are employed in the treatment of uric acid deposits; the chief of these are the *alkalies;* but *water*, especially soft and distilled water, is a solvent, and the diuretics, by increasing the quantity of water in the urine, likewise act indirectly as solvents.

It should be clearly understood that alkaline remedies, though commonly described as solvents, are so only indirectly—that is, their bases combine with the uric acid, compounds resulting, which are much more soluble than the uncombined acid.

The chief alkaline remedies resorted to are liquor potassæ, carbonate of potash, carbonate of soda, the salts of the vegetable acids, as the acetate, citrate, and tartrate of potash, borates of potash and soda, phosphates of soda and ammonia.

Liquor Potassæ.

The liquor potassæ of the Pharmacopœia contains only about one grain of potash in about ten minims of the solution: hence, when this remedy is administered, it should not be given in less than one scruple or half-drachm doses, three times a day. It may be given in some bland vehicle, or in a mixture in combination with other remedies. Brandish's alkaline solution is much stronger than the ordinary solution, and hence its greater efficacy. The flavour of solution of potash is caustic and disagreeable, and the remedy is probably not so efficacious as the carbonates of potash and soda.

Carbonate of Potash.

The dose of this remedy which should be given is from one scruple to half a drachm, thrice daily. To render it more agreeable, it may be given in combination with about half its weight of citric acid; this causes slight effervescence. The administration of alkaline remedies should be accompanied by the free use of diluents, of which the best is pure water—if *distilled*, so much the better.

A popular remedy in the treatment of uric acid gravel, in some parts of the country, is a quack nostrum which has received the absurd appellation of "Constitution Water." The empirical employment of this remedy I brought prominently under the notice of the profession, in my Review of the fourth edition of Bird's "Urinary Deposits," published in the *Medico-Chirurgical Review*. It owes its efficacy to carbonate of potash. From an analysis of a sample of it, it appears that it contains about 3·2 per cent. of impure carbonate of potash or pearlash. The following remarks respecting this water are from the Review mentioned: "The dose of constitution water is about the eighth part of a bottle, about the size of a wine-bottle, four doses to be taken daily, this being about 184 grains or upwards of three drachms of carbonate of potass. The price is 62*s*. per dozen; its actual cost, exclusive of bottles, is not nearly as many farthings.

"Furnished with the above receipt or analysis, the admirers of 'constitution water' may supply themselves with it at a very much cheaper rate than 5*s*. 2*d*. per bottle. The remedy is indiscriminately recommended in all cases of 'strangury, gravel, and stone.' The only cases to which it is really applicable are those of uric-acid diathesis. In some forms of urinary deposit and stone, it would be productive of incalculable mischief, and therefore it should on no account be taken excepting under medical advice. Persons are too apt to imagine that there is some hidden charm in these secret and empirical remedies. For the removal of this delusion, no method is so effectual as the publication of their actual composition."

Carbonate of Soda.

The dose of this salt is about the same as that of carbonate of potash. A remedy which has some celebrity in the treatment of uric acid is "Vichy water," the chief constituent of which is *bicarbonate of soda*. Some years since, I employed Dr. Letheby to make an analysis of the artificial Vichy water of the German Spa at Brighton. This analysis I published in the review of Dr. Bird's "Urinary Deposits," from which I have had such frequent occasion to quote. It was as follows:—

Artificial Vichy Water.—2000 grains of the water were evaporated, and they yielded 9·88 grains of a saline residue, which had the following composition:—

Bicarbonate of soda	10·14
" magnesia	·58
" lime	·26
Sulphate of lime	·58
" soda	—
Chloride of sodium	1·16
Silicate of alumina	·12
	12·84

From this analysis, it appears that the artificial water very closely resembles in its composition the natural water from the wells of Vichy, and which were analyzed by Henry in 1847. It also resembles the water of the springs of Cusset and Hauterine, in France.

The dose of Vichy water is a small tumbler-full two or three times a day, which amounts to about a pint, and contains 35·5 grains of bicarbonate of soda.

With a little dry sherry, such as Montilla, the artificial Vichy water forms an agreeable after-dinner beverage for persons whose urine contains an excess of uric acid.

Salts of the Vegetable Acids, as the Acetate, Citrate, and Bitartrate of Potash.

These salts are very efficacious when given in sufficient doses; they may be administered in combination with the acid, or they may be added separately to the carbonated salts, the mixture being sweetened with syrup of orange-peel, and drank in a state of effervescence.

The immunity of the inhabitants of wine-producing countries from calculous affections is supposed to be in a great measure attributable to the large quantity of bitartrate of potash, or winestone, which they contain.

These salts, in passing through the system, are usually converted into carbonates; but where the digestive organs are weak, the decomposition is more or less incomplete.

Not unfrequently the continued use of the carbonates of potash and soda disorders the digestion greatly; in such cases the salts of the vegetable acids become very valuable, and of these, on account of the tendency of the tartrate to affect the bowels, the best preparations are the acetate and citrate. The dose of all these salts is about a half a drachm, three times daily.

Borates of Soda and Potash.

The biborate of soda is a very active solvent for uric acid, more so than the alkaline carbonates; and hence it has been advantageously employed in some cases of uric-acid gravel. Its administration to women is not advisable, since it exerts a stimulant action on the uterus; and Dr. Bird met with two cases in which it produced abortion.

Borate of potash is a still more active solvent for uric acid than biborate of soda. It should be largely diluted; indeed this remark applies to all the alkalies.

The following prescription for uric-acid gravel is by M. Bouchardet:—

℞. Potassæ bitartratis, ʒ i., grs. xv.
" boratis,
" bicarbon, *aa.* grs. xv. M.
Fiat pulvis.

Phosphates of Soda and Ammonia.

These salts are also excellent solvents for uric-acid. Golding Bird states that he has administered *phosphate of soda* in several chronic cases of uric-acid gravel with the effect of rapidly causing a disappearance of the deposit.

The *phosphate of ammonia* has been particularly recommended by Dr. Buckler, of Baltimore, even in cases in which the uric-acid is deposited as a calculus, or around the joints, combined with soda, as in gout. I notice at page 176 of the fifth edition of Bird's "Urinary Deposits," the following remarks respecting this salt:—"I have given it a fair trial in hospital practice, and have no hesitation in saying that it has always succeeded in keeping uric-acid in solution in the urine, and in this respect it has appeared to be at least equal, if not superior to borax and phosphate of soda: but I certainly have never seen it diminish the tophaceous deposits in chronic gout. In more recent effusion into the joints of sub-acute forms of rheumatic gout, it has certainly been of service."

The dose of phosphate of soda is from one scruple to half a drachm, and of phosphate of ammonia about ten or fifteen grains, much diluted.

We have now completed the description of the chief solvent remedies employed in the treatment of uric-acid deposits. It will be perceived that the number of these remedies is very great, and that the effect of many of them is considerable. *We must never, however, lose sight of the fact, that these remedies do not go to the root of the mischief, but are merely palliative.* In all cases it behoves us to search out the cause of the excess of uric-acid, and it is to this that the more important part of the treatment must be directed.

Benzoic and Cinnamic Acids.

Another remedy resorted to in cases of uric-acid deposits, is benzoic acid. Its chemical action is very peculiar; while the salts already described act upon the uric-acid *after* it has been formed, these prevent its formation. Benzoic acid, itself destitute of nitrogen, combines with nitrogen derived from some nitrogenous substance contained in the blood, and which would otherwise go to form urea and uric acid, and is itself converted into hippuric acid, a substance rich in nitrogen.

It has been stated that under the use of benzoic acid, uric-acid sometimes altogether disappears. This is questionable. It has been shown by Dr. Garrod that the hippuric acid is formed at the expense of the urea, but probably not entirely, as it is very certain that uric acid is also in some cases greatly diminished.

The body with which benzoic acid combines is probably sugar of gelatine or glycocoll, one atom of each of these forming one atom of hippuric acid. *Cinnamic acid* undergoes a similar change to benzoic acid, and is likewise converted into hippuric acid. *Bensoate of ammonia* has been particularly recommended as an efficient remedy by Dr. Holland. Benzoic acid possesses the additional advantage over many other remedies of exciting diaphoresis, thus fulfilling an important indication in the treatment of uric deposits. The dose of benzoic acid is about ten grains taken in syrup three times a day.

We are sometimes called upon to treat deposits of urates apart from those of uric-acid. The nature of the curative treatment required of course depends upon the cause of the deposit, according as this is connected with inflammation, fever, cold, over-indulgence, mal-assimilation, gout, &c.

It may be stated generally that the urine containing urates is less acid than that depositing uric-acid, and that the urates are much more readily dissolved than uric acid; hence the solvent and antacid remedies are not so much required in these cases, and it will generally be sufficient that the quantity of urine be increased, as by diluents and small doses of diuretics, such as the nitrate and acetate of potash.

Original Papers.

LEAVES FROM THE NOTE-BOOK OF A WEST INDIAN PRACTITIONER.

By Lewis Ashenheim, M.D., &c.,
Falmouth, Jamaica.

FATAL CASE OF SPINAL EFFUSION FROM VIOLENCE.

On the evening of the 11th of February, 1854, I was called to see Mr. G. M.——, who was suffering from fever. Although the patient was constitutionally of a restless disposition, everything progressed favourably until the evening of the 17th, when, wishing to go out, he dressed himself, and, in a supposed scuffle with his nurse, was precipitated down a very steep flight of stairs. He got up, and walked back to his bed. The following was given to allay excitement: Hydrochlorate of morphia, potassio-tartrate of antimony, of each one grain, and camphor mixture, four ounces; a tablespoonful to be given occasionally. This seemed to quiet him; but in about two hours afterwards I was again summoned, when I found him very low. Stimulants were at once administered, but he soon *imperceptibly* died. An examination of the head was permitted, and the cause of death detected; an effusion of bloody serum upon the medulla oblongata, undoubtedly the result of injury from the fall. Dr. Edward Skues, staff assistant-surgeon, assisted me in the autopsy.

CASE OF RETAINED PLACENTA.

Case 1. March 18th, 1854.—Called by George L——, a coloured man of this town (Falmouth), to visit his wife, who is a black woman, at about nine o'clock, A.M. She had been delivered of a child at seven o'clock; but the midwife, being unable to remove the placenta, had become alarmed, and requested medical assistance. On examination, I found a firm, irregular contraction of the womb (to which the name of hour-glass contraction has been applied), embracing the placenta, as it were, in its centre. I ordered tincture of opium, sixty drops, to be taken immediately; waited one hour, and then proceeded to the extraction. After some troublesome manipulation, I introduced my hand up to the fundus. The placenta was morbidly adherent to more than one-third of the uterine surface, and the extraction was extremely difficult and trying. The adhesions could only be broken down by a sort of rubbing movement between the fingers and the thumb; but I succeeded in removing the whole *en masse* in about an hour and a quarter. I was several times compelled to desist, owing to the numbness of the fingers, but did not remove my hand from the uterus. The patient did well, and never complained of anything but debility.

Case 2. April, 1854.—Delivered Mrs. M. H—— of a female child, in this town, under the influence of chloroform. The labour was perfectly natural, but uncommonly rapid. On attempting to remove the placenta, I found the os uteri firmly contracted upon the cord. I cautiously dilated the orifice, and slightly pulled at the cord, but got no response from the placenta. On introducing my hand into the uterus, I discovered that the placenta was adherent to its upper and right aspect. I carefully scratched the adherent portions off, which took fully a quarter of an hour to accomplish. On the removal of the placenta, the womb refused to contract, and alarming flooding ensued. Cold water poured from a height on, and brisk applications of towels soaked in cold water to, the abdomen, together with the introduction of the hand into the womb, induced uterine contractions. The patient was kept under the influence of chloroform from the commencement of labour until its final termination, and was throughout perfectly unconscious. This case did uncommonly well.

FRACTURE OF THE CRANIUM.

On the evening of the 18th February, 1854, Thomas Carter, a black man, aged sixty-five, was knocked down by a blow on the sternum, and fell on the back of his head. He was intoxicated at the time, and the concussion rendered him senseless. He was taken to the police station, where he remained until twelve o'clock P.M., when he recovered himself and walked away. He remained in the streets some two hours or more, when he returned, laid down, and again became insensible. I was sent for about nine o'clock in the morning, and found him labouring under aggravated symptoms of compression of the brain. He died in about two hours afterwards. A coroner's inquest was held, to which I was summoned, and a post-mortem examination ordered. The following were the results:

External examination: Slight abrased wound on the left malar bone; wound of the scalp on the posterior part of the skull; froth upon the nostrils and mouth. Abdomen: Stomach very pale, and containing a tolerable quantity of undigested green plantain. There was no alcoholic odour; the intestines were also pale, but empty. The spleen was so sunken as to be found with difficulty. There was a slight fatty degeneration of both kidneys, but more so in the right one. The bladder was empty; the liver was enormously enlarged, and slightly congested. Chest: No ecchymosis under the integuments of the sternum; the cartilages of the ribs were ossified, and required to be sawn through; the lungs were pallid and mottled; there were adhesions of the pleura to the ribs on the right side. The heart was healthy; the left ventricle was empty, but the right ventricle was full of fluid blood. Head: under the scalp there was a large, thick mass of congulated blood, covering fully two-thirds of the surface of the skull; the pericranium was much tumefied. There was a fracture which extended from the posterior part of the left parietal bone into the sagittal suture, thence into the right parietal bone, and thence into the frontal bone, where it diverged into two fractures. There was extensive extravasation of blood upon the right hemisphere of the brain, and a much slighter extravasation on the superior surface; the anterior portion of the right hemisphere of the brain was much lacerated.

CASES OF ANIMAL POISONING.

CASE 1. Nov. 1853.—William B——, a black man, aged about twenty-eight, bought some white crabs at the market-place, Falmouth, on the 5th inst., and he and his wife partook of them. The crabs had already been cooked. They both started for their home at about three P.M., and when they reached Deeside, a village about twelve miles distant, the man complained of acute pains in his bowels. Severe purging and vomiting came on, accompanied with bloody evacuations. He managed to crawl on to Liberty, a small settlement about two miles further on, but was compelled to stop there. The symptoms continued and he died in great agony about eleven o'clock on the same night. A coroner's inquest was deemed necessary, and I was required to make a post-mortem examination of the body. The heart, lungs, liver, and spleen were in a healthy condition; the stomach contained a small quantity of well-digested matter, amongst which were small particles which very much resembled the flesh of shell-fish; the mucous coat of the stomach was abundantly studded with red patches, some of them as large as a sixpence. These inflammatory patches increased both in size and comparative number, as the dissection was proceeded with. The intestines contained a large quantity of paleish sanguineous fluid. There was no ulceration in any part of the canal. From these appearances, and the history of the case, I had little hesitation in giving my opinion that the man died from having partaken of deleterious food; and a verdict to this effect was accordingly returned.

The man's wife, who had partaken of the boiled crabs with him, was also seized with purging and vomiting, although not to such an extent.

CASE 2. March 7th, 1854.—I was this day summoned to attend a coroner's inquest at Bunker's-hill, in this parish, in the matter of a young black woman, who had died in great pain a short time after eating some fresh pork. I made a post-mortem examination, and found nearly all the appearances which are presented when death results from animal poisoning.

Several other persons partook of the same pork without any inconvenience to themselves.

CASE 3. Oct. 19th, 1857.—M.——, Esq., of this town, a tall, well-built, and rather plethoric man, of about thirty-eight years of age, partook at breakfast of preserved lobsters, which are usually exported in tins. He passed the day tranquilly, dined heartily, and retired to rest in his usual health. On the following morning, he again ate of the same shell-fish, a portion of which had been kept over night. In about three hours afterwards, I was hurriedly sent for, and found him in the following condition:—He was extremely pale, and his countenance expressed great anxiety. The skin was very cold to the touch, and covered with a clammy perspiration. He was suffering very much from tormina and writhing; he repeatedly bent himself double There was severe purging, first of fæcal matter, and then of large quantities of a sanguinolent fluid, almost every five minutes. The prostation was extreme. An emetic of potassio-tartrate of antimony with ipecacuanha speedily induced vomiting, which was liberally encouraged by mustard and warm water given in large quantities every five minutes. When the stomach had been evacuated of all its contents, a large dose of castor oil was administered, which was retained. The acute pains still continuing, were relieved by small doses of chloroform suspended in gum mucilage, given internally. Fever soon came on, which was combated with calomel and opium, and other appropriate remedies. Mr. M—— recovered slowly after having been confined to bed for four days. For a considerable time afterwards, his appearance denoted the severe shock which his constitution had received.

ABSCESS BETWEEN THE SCAPULA AND RIBS.

I was requested, on Feb. 5th, 1849, by a medical practitioner of this city, to examine a girl aged thirteen, for a supposed abscess of the shoulder-joint, which was judged to have been induced in the following manner: The child had been romping with her uncle, who, in attempting to detain her, laid hold of her fore-arm. In endeavouring to escape, she suddenly wrested herself from his grasp. In a couple of days the shoulder-joint began to swell, and continued to do so until at length the scapula was forcibly thrown backwards from behind the ribs, the space between the bones being occupied by an extensive abscess. There were also swelling and fluctuation anteriorly in the coraco-clavicular region. It was suspected that the long head of the biceps flexor was ruptured. The patient was in extreme distress, and commencing to be hectic. Chloroform being administered, I passed a long, straight, narrow, sharp-pointed bistoury into the abscess posteriorly, entering in front of the inferior angle of the scapula, and gave issue to a pint of thick pus. The swelling, anteriorly, appeared to be an extension of the posterior abscess, as its contents found their way through the incision by simple pressure of the fingers in front. The discharge continued, and in a few days, under proper bandaging the case was dismissed as cured.

INTUS-SUSCEPTIO, CURED BY SEDATIVES.

I was called into consultation on March 7th 1854, at about ten, P.M., to see a lady aged sixty-eight, residing in this town. She had been suffering from colic; her bowels had not acted for several days, and there was a constant desire to go to stool, without any satisfactory result. There was slight pain on pressure of the abdomen. Purgatives, which had been previously prescribed, had failed in their intended effect. The administration of croton oil and other purgatives, with enemata, was the course of treatment now determined on. During the whole of the next day, there was no evacuation; I consequently (at nine o'clock in the evening) passed an œsophageal tube into the colon, as far as its length would permit, and largely distended the gut with an enema composed of turpentine, castor oil, &c. This was followed by a slight discharge of small scybalæ. The same medical treatment was continued throughout the day. On the 9th, evacuations were still wanting, and I passed the tube twice during the day without any good effect. Stercoraceous vomiting now set in, and I proposed to Dr. G. Macartney (one of the oldest practitioners in the parish, and who was in possession of the case) an entire alteration in the treatment, by substituting a relaxing and sedative course instead of the former stimulant method. He cordially agreed to this change, and powerful sedatives, such as morphia, hyoscyamus, Dover's powder, were substituted for the former irritant medicines. Evacuations commenced within twelve hours from the commencement of this change of treatment, and, on the 14th of March the aged patient was out of danger.

DEATH FROM SHOCK.

October 31st, 1856.—Catharine F——, a black child, about nine years of age, having made use of improper language, was corrected by her uncle, who gave her six stripes with a thin leather strap. She ran away from him into the kitchen, some twenty yards, where she fell down dead. I was required to make a post-mortem examination of her body. I carefully searched for external marks of violence, and, with the exception of two or three slight ecchymoses, found none worthy of note. The three cavities were carefully examined. The lungs were very much congested, and exuded, on pressure, a sanguineo-mucous fluid; these organs had most decidedly been affected for some time. The liver rather exceeded the natural size; it was indurated and morbidly attached to its investing membrane. The stomach presented a very unhealthy appearance, indicative of long-standing disease. There were scattered livid patches on the lining membranes, which peeled off with great facility on slightly pulling at it. There was decided disease of the kidneys; these were mottled, and their internal structure was more or less in a state of true congestion. The spleen was hardened, contracted, and shrivelled. There was degeneration of the mucous membrane of the intestines, which were pale and attenuated throughout, and much distended with gas; and about the middle of the small intestines there was a coil of the long, round, intestinal worms, intertwisting one with the other, still alive, and numbering from forty to fifty. There was a notable effusion in the lateral ventricles of the brain, which also was in a slight state of congestion. I could not attribute the death to violence, as the injuries inflicted by the strap were of too trivial a nature; but I can very easily imagine death to have been occasioned by sudden shock, acting strongly upon a greatly debilitated constitution. This is the opinion which, after mature deliberation, I delivered before a coroner's jury.

DEATH FROM STARVATION.

The following are the results of a post-mortem examination which I made on the body of a coloured infant, aged four months and a half, at Martha Brea, near Falmouth, on the 16th of March, 1856. There was extreme emaciation, but no external marks of violence. The lungs were rather undersized, and there was inconsequential post-mortem discoloration. The air-cells, when strongly pressed between the fingers, emitted a mucous fluid, slightly tinged with blood, in small quantity. The trachea contained mucus in rather large quantity. The heart was normal, and the right ventricle was plugged with fibrinous concretion. The stomach was almost empty, and only contained not quite a teaspoonful of a mucus-like fluid. The kidneys appeared congested (qy. gravitation?). The intestines were pale, thin, and empty. There was no appearance of nourishment having recently been given. The bladder contained a very small amount of urine. The spleen was undeserving of note, and the fluid in the mother's breasts was wretched in quality, and not by any means nutritious. The coroner elicited the fact that the mother was in the habit of leaving her infant during the whole of the day, and returning home only late in the evening. The jury returned a verdict of Manslaughter against the mother.

PERPLEXING CASE OF AN INFANT ALLEGED TO HAVE BEEN STILL-BORN.

As I deem the following case rather unique in its medico-legal bearings, especially when the colour of the child, and the suspicious circumstances under which it was born, are taken into consideration, I briefly subjoin the particulars.

The child was a mulatto, said to be the offspring of *black* parents, and asserted to have been born dead. Its weight was four pounds and a quarter, and its length sixteen inches and a half. On opening the thorax, a yellow, jelly-like fluid issued, which seems to have formed on the external and anterior surface of the pleura. The pericardium contained a much larger quantity of fluid than usual. The veins of the neck directly leading downward to the heart, were turgid with black blood. The heart and lungs, when placed carefully in a basin of water of the same temperature as the surrounding atmosphere, sank, but *not rapidly*. The lungs, *conjointly separated, and cut into small pieces*, when treated in the same way, also *gradually* sank. There was no crepitation. On cutting into the substance of the lungs, and on squeezing some of the separated portions, white drops somewhat resembling pus, exuded. The lungs were of a pale-red colour, and overlapping the sides of the heart; the edges were *rounded*, not *sharp* or *pointed*. The right ventricle of the heart was completely filled with blood of the colour and consistence of tar. The thorax was *slightly arched* and *expanded*, but the diaphragm rose a little into the cavity of the chest.

Remarks.—As these appearances are very contradictory—as some of them are evidences of pre-existing disease—some of the infant having respired, and some of its having never breathed, it was rather difficult for me to give a decided opinion before a coroner's jury. After deliberation, I resolved to give the mother the benefit of the doubt, as the greater mass of the post-mortem evidence was in favour of the belief that the child was born dead, or, at all events, imperfectly breathed. However, it must not be forgotten that both the asserted parents were *black*—the infant *mulatto;* and that the mother was alone at the moment of delivery.

REPORT OF A CASE OF FRACTURE OF THE SKULL, WITH SEVERE INJURY OF THE BRAIN; RECOVERY.

By William Smith, Esq., M.R.C.S. Eng.,
Chesterfield.

At three P.M., on the first of February, 1858, I was called to see J. H——, who was reported to be dying from a wound in the head, caused by the bursting of a gun. The man lives about three miles from my residence. He is a collier, aged thirty-eight.

State on first inspection.—I found the patient in bed; the face collapsed and pale; the pulse slow and weak. He did not answer my questions, yet appeared from subsequent indications not altogether insensible. On removing the bloody rags with which the head was enveloped, I found a large triangular wound about half an inch above the left eyebrow. From this wound protruded a portion of brain and some clotted blood, which also distended the skin around. There was considerable elevation of the skin in the neighbourhood of the wound. (I just remark in this place that the accident had occurred about four hours before I saw him.) On removing the brain and clotted blood, I came on several small pieces of comminuted bone, and, on further examination, a hole through the frontal bone about the size of a florin. Through this I found I could easily introduce my finger into the cavity of the cranium, and found the brain apparently much broken down and mixed with other small fragments of bone, which I carefully removed. The depth of the cavity admitted my forefinger to its whole length, and a probe three inches and a half long could be passed without meeting the slightest obstacle.

Previous history of the case.—In firing a gun at a small bird, the weapon burst, and (probably) a piece of the lock of the gun was propelled with enormous force against the forehead. It was a subject of surprise to me that a projectile penetrating so deeply, and inflicting such a wound should not have lodged in it, but it was partially explained by the fact that the man wore at the time a stiff felt cap, and this was perforated. He immediately drew it off after the accident, and probably in doing so he pulled out the instrument, whatever it was, with the stiff and unyielding edges of the cap. He walked home, a distance of about fifty yards, the bleeding being profuse, and several small portions of brain falling from the wound as he coughed on the road. Having cleared out all portions of bone I could reach, I ordered a wet pad to the wound, and left him.—Seven P.M.: He is not quite so collapsed, and the pulse has somewhat recovered itself. Considerable bleeding from the wound, which I again examined, and removed from it two or three more small pieces of bone.

Feb. 7th.—The patient slept at intervals during the night. He vomited freely towards midnight, and the clot of blood in the wound was thrown out with considerable force, and some hæmorrhage followed. This morning the skin is warm, and the pulse about 70, but soft. I directed them to apply assiduously cold spirit lotions to the head, to give him five grains of calomel every fourth hour, and an aperient mixture of sulphate of magnesia, &c. He passed his fæces and urine involuntary during the night. He can with difficulty be induced to answer any question, and complains much of pain in the back.

8th.—He is to-day quite sensible, but apparently scarcely aware of his dangerous condition. He feels some pain in the wound, but not so much as on the preceding day. Wishes to get up and have some dinner; pulse 70, full and soft; bowels have been twice relieved, and he has passed his urine. On both occasions he discharged these functions properly. There is not the slightest trace of any paralysis of the voluntary muscles. The tongue is rather white and furred, but at the same time moist. Ordered to continue cold lotion to the head; to take the aperient mixture and one grain of calomel every fourth hour.

9th.—Continues quite rational, and appears to improve. The tongue cleaner; pulse slow, 60. The pain in the wound less, but there is some deafness of one ear, and a confused feeling on the left side of the head. The bowels have been open once since last report. The wound occupied still with a large clot, which I have not disturbed since the day of the accident. His wife states he has slept soundly during the night, and snored loudly, (stertorous breathing?) The pupils are slightly dilated. There is considerable ecchymosis round both eyes, particularly the left. To continue calomel powders, purgative mixture, and cold lotion.

10th.—Complains of much pain about the wound, and during the night his wife says he appeared partially delirious, was frequently passionate with her for slight circumstances, and twice attempted to get out of bed. The tongue is clean, the pulse slow (60), but there is still much excitement in his look and manner. Ordered six leeches to the forehead; to continue the aperient mixture and the calomel powders.

11.—The pain in the head has been relieved by the leeches, the wounds from which have bled freely. He complains much of weakness, and expresses a desire for something more substantial than the milk diet to which I have limited him. Pulse slow and soft, 56; tongue clean. To have broth for his dinner; to apply a small poultice to the wound, which is dry, and exhibits no indication of suppuration; to omit the aperient mixture and the powders, as the bowels have acted freely the day before, and the gums are slightly tender.

12th.—Seems very comfortable, and says he has been much better since taking the broth. Pulse slow, 56; tongue clean. Has had a very good night. The wound looks scarcely so dry, there being some little action about the edges. To apply a poultice of equal parts of bread and oatmeal.

13th.—This day I was unable to see him, but I received a message that he was not so well, and had much pain in the head and back. Ordered an aperient mixture and one grain of calomel night and morning.

14th.—Is better; suppuration is freely established, and he is in all respects doing well.

17th.—Removed another piece of bone from the wound to-day; two more subsequently came away in the poultice.

The case from this period went on well, and the wound was gradually healed, the pulsation of the wound being, however, very evident through the thin cicatrix which covers it. He is at this date, (April 8th) quite convalescent, with the exception of debility and occasional pain in the back. The cicatrix is depressed, but not remarkably so.

Remarks.—This case exhibits to a wonderful degree the serious amount of injury which may be inflicted on the brain, and yet recovery ensue. It scarcely bears out the views of phrenologists, as, even assuming the brain to be a double organ in all respects, we should certainly expect to find more mental disturbance than was shown in the present case.

Chesterfield, 1858.

ON A CASE OF DISLOCATION OF THE KNEE-JOINT.

By Henry Jacobs, Esq., M.R.C.S. & L.A.C.

Complete dislocation of the knee-joint is, I believe, of exceedingly rare occurrence, although it sometimes happens. In this instance the patient was a strong countryman, about six feet high, who was assisting a horse with its load of coal up hill, by pushing with his shoulder at the tail end of the cart, when the fore feet of the animal came on a wet spot in the road, and immediately slipped under him. On the horse regaining his feet, the load, which had been taken momentarily off the shoulder of the man, again fell heavily back on it, while his leg was yet in the extended position, the lower end of the femur was by this circumstance thrown in front of the head of the tibia, and the head of the latter into the ham. The deformity was very great; the leg was flexed upon the thigh; and all traces of the patella were lost in the swelling.

Some time having elapsed previous to my seeing the man, this circumstance will account for the great difficulty I experienced in the reduction of the bones, which was not accomplished without the aid of a medical friend and the use of pulleys, when the following plan was pursued:—

The man was laid on the (left) sound side, and the round post of the bedstead, padded, was placed into the hollow above the head of the tibia, which rested on the lower end of the femur, the post acting as the fulcrum. The ordinary extension having failed to reduce the dislocation, the pulleys were next applied, which, after a long trial, succeeded in bringing the bones into apposition. The after-treatment consisted in the application of leeches, and cold evaporating lotions. The man was in perfect health at the time of the accident. His recovery was speedy, and with but little stiffness of the joint.

Considering the extreme laceration that must have taken place, I am persuaded that such an injury to a man in town would have been attended with much more tedious results.

The Asylum, Colney Hatch, Middlesex, June, 1858.

LESION OF THE NERVES IN THE NECK AND OF THE CERVICAL SEGMENTS OF THE CORD AFTER "FAUCIAL DIPHTHERIA."

By W. W. Gull, M.D.,

SENIOR ASSISTANT-PHYSICIAN TO GUY'S HOSPITAL.

During the last two years it has occurred to me to see diphtheria in a severe form in several instances. There have been two varieties of the malady. In one, the disease began in the tonsils or soft palate, and was characterized by an exudation of brownish fibrin upon these parts, often to a very remarkable extent. In some cases, as the disease progressed, the glands and cellular tissue of the neck became swollen and hard, as in phlegmonous erysipelas; the skin over the affected parts became purpurous, and a bloody ichor was discharged from the nostrils. This variety of the disease might be designated, for the sake of distinction, "faucial diphtheria," to distinguish it from the second form, in which the exudation is on the sides or general surface of the tongue, or the mucous membrane of the cheeks and lips, and, in common with these, over the tonsils and soft palate. In this second variety, death, when it occurs, arises, as far as I have seen, from a cause different to that in the first—namely, by extension of the disease over the respiratory or digestive mucous surfaces, occasioning symptoms of croup and gastro-enterite, whilst, in the first or faucial variety, death results rather from asthenia, apparently induced by direct injury to the pneumogastrics and sympathetic system of nerves, through inflammation of the areolar tissue in the neck. It is not, however, my object, to discuss these points in the history of the disease, but to call attention to the important complication which occurs in the convalescence from the faucial variety. The symptoms appear to arise from a lesion of the trunks of the nerves about the throat or from a further extension of it to the cervical portion of the cord.

About a fortnight ago, I was called to see a boy of whom I received the following history: Age eleven. Had had an affection of the throat, from which he convalesced and was sent into the country for change of air. About five weeks from the time of his being taken ill, it was noticed that he did not carry the head erect—it drooped to one side or the other. There was occasional difficulty in deglutition; loss of voice and attacks of dyspnœa threatening asphyxia. In a day or two from the beginning of these symptoms the breathing became entirely thoracic. The diaphragm was unmoved in inspiration and depressed in expiration, indicating a loss of power in the phrenic nerves. Deglutition was next to impossible. The child could utter no sound. There were fearful attacks of strangulation when the head was moved in particular positions, and even when the breathing was at the best, there was blueness of the lips and tracheal râles. The intelligence remained unaffected. The legs could be moved only feebly; the movement of the arms was not impaired; the muscles of the neck were wasted and flaccid; there was no swelling of the fauces; over the transverse processes of the cervical vertebræ, on the right side, there was tenderness, and the adjacent deep-seated absorbent glands were slightly enlarged. No febrile excitement. Pulse feeble, 90. A paroxysm of suffocation suddenly ended the case a few hours after my visit. No post-mortem examination could be obtained.

A few days after I had seen this case, a similar one was brought to me by my friend, Dr. Kingsford, of Clapton. The previous history was all but identical with that just given, except that the faucial affection had been apparently more severe. A child, aged three years, had had a severe attack of diphtheria about the fauces, and was recovering, when, at the end of a month it was noticed to carry its head stiffly; the gait was unsteady, the right leg being weaker than the left. Voice husky and indistinct, and deglutition sometimes difficult. The sphincters continued to act well. There were no remains of the disease on the mucous membrane of the fauces. The throat had healed well, but still the deep-seated absorbent glands on the right side of the neck could be felt enlarged. The movements of the chest and extremities were normal.

The extension of inflammation from the contents of the pelvis to the membranes and lumbar segments of the cord has been elucidated by some cases of paraplegia recorded in the "Medico-Chirurgical Transactions for 1856." These cases following diphtheria appear to belong to the same pathological series, the cervical portion of the cord being affected from disease in the fauces in a similar way to the lumbar segments in vesical or other pelvic affections. They are so far imperfect that the first was not examined post-mortem, and the second is still under treatment, but they appear to be sufficiently distinct as illustrations. I should not have ventured to record them, however, without further confirmation, but that it seemed desirable not to delay an inquiry, where, it is to be hoped, the opportunity for further observation will soon have passed away with this new, or newly-revived pestilence.

Finsbury-square, June, 1856.

REPORT OF A CASE OF ARREST OF DEVELOPMENT, IN WHICH THERE WAS ENTIRE ABSENCE OF THE VAGINA.

By Charles Coates, M.D.

PHYSICIAN TO THE BATH GENERAL HOSPITAL.

The following case came under my care, a short time ago, at the Eastern Dispensary of this city :—

A. E——, a servant of all work, aged twenty-nine, unmarried, was admitted a patient, suffering from dyspepsia and general debility. She was of middle stature, fair complexion, rather above the average degree of stoutness, and had the peculiar waxy look of the chlorotic.

She stated that for the last thirteen or fourteen years, she had not enjoyed good health, though never suffering from any acute disease. She had been unequal to laborious work or much exertion, and in consequence had been obliged to relinquish several good situations. It was at this period of puberty that her health began to decline, and she then suffered from severe pain in the head and back; from that time to the period when I saw her she had a regular recurrence of these symptoms every month, generally lasting from three to four days, and then gradually subsiding. She had never menstruated. For several years past she had been under the constant care of different medical men, taking all kinds of medicine for the induction of menstruation, without the slightest effect. According to her own account, she had been an out-patient at a public institution for nearly seven years, but had derived little if any benefit. The true nature of her complaint seems not to have been suspected, as she stated that a vaginal examination had never been either made or proposed.

Such is the brief history of this patient up to the time when she first came under my care. I made a most careful examination of both the chest and abdomen, but failed to discover any abnormal peculiarity in either, save an only partial development of the mammæ, which had more the feeling of adipose tissue than glandular structure. As all the uncomfortable feelings complained of were evidently connected with the non-appearance of the menses, and I suspected that an arrest of development existed in some of the organs of generation, she was induced to submit to a vaginal examination, which elicited the following peculiarities:—Externally the mons veneris and labia majora were well developed. On separating the latter, the clitoris, which was of normal size, was brought into view; but the meatus urinarius could not be seen in its natural position at the base of the vestibulum. At a quarter of an inch below the latter, were two rudimentary nymphæ, enclosing a small opening with a crescentic margin, not unlike that of a hymen, which, on closer examination, and on the introduction of a catheter, proved to be the true orifice of the urethra. This canal, rather wider than natural, was fully two inches long, not a trace of vagina could be discovered, the meatus being only one-eighth of an inch from the fourchette. The length of the perinæum was one inch and a quarter. On examination per rectum, a small body, probably a rudimentary uterus, about the size of a common garden bean, was found to exist, and was movable between the rectum and bladder. The right ovary, of normal size, could be distinctly felt; the left, either was not present, or was too high up to be reached with the finger. On introducing a catheter into the bladder, neither a rudimentary vagina, nor even the space for one, was found to exist, the neck of this apologetic uterus seeming to wedge itself between the urethra and rectum.

Such was the result elicited by two careful examinations at different times, which also unfortunately proved the utter hopelessness of this poor creature being relieved by any operative procedure. She confessed to have felt sexual desire, and had had several offers of marriage, but knowing that some peculiarity existed in her generative functions, she had not ventured to accept any of them.

During the periodic attacks, I prescribed saline aperients and sedatives, from which she derived much relief; and in the intervals iron, under which treatment her general health greatly improved. The only prospect I could hold out of permanent relief was her arrival at the climacteric period of life, when it is possible she may regain as good a state of health as she enjoyed before puberty.

Bath, June, 1858.

ON A CASE OF POISONING AN INFANT BY SYRUP OF POPPIES.

By R. T. Lodge, M.D., Liverpool.

An infant, six weeks old, was brought to my surgery at seven o'clock in the evening of the 25th ult., in a state of complete narcotism, a teaspoonful of syrup of poppies having been given to it at twelve o'clock the same day.

As seven hours had elapsed without medical aid, I was satisfied that the poison had entered the circulation, still I thought it advisable to give a stimulating emetic. This failing, I at once resorted to more energetic means. A mustard bath was immediately prepared, when the infant was placed in it. After an interval of a quarter of an hour, it cried and struggled. I continued the bath three quarters of an hour. Upon being taken out, it again relapsed. I then resorted to the Ready Method, which had the effect of partially rousing it as long as it was kept up—viz., a quarter of an hour. Another mustard bath was prepared, and the infant once more placed in it. A *continued agitation of the bath* was kept up; and to this I attribute its great efficacy, as the fumes from the mustard entered the nostrils, rousing the child effectually. The perspiration broke out freely upon the face and head, and after continuing this treatment for an hour and a quarter, I allowed it to be taken home at half-past ten, giving directions that it should be kept awake for a few hours longer. The next morning the child was quite well, all redness having subsided from the skin, and no unpleasant effect remaining.

I give these particulars, as I am convinced that had I sent the child home, and given directions to be followed out by nurses or parents, it is more than likely it would not have recovered. Any want of knowledge or of perseverance in so critical a case would most likely have caused it to end fatally.

Seymour-street, July, 1858.

CAUTION IN THE ADMINISTRATION OF CHLOROFORM.

By Henry Potter, Esq., M.R.C.S.

After ten years' experience in the administration of chloroform at St. George's Hospital, I feel I am called upon to offer the profession a few practical remarks on the subject. It has been my object of late to try and ascertain the least amount of anæsthesia necessary for surgical operations, and I am quite confident that a much less quantity of chloroform is required, especially in minor operations, to produce the effect than is usually supposed to be necessary, provided it be given slowly, and is sufficiently diluted with atmospheric air, as in Dr. Snow's apparatus; I mean that state of anæsthesia necessary for the abolition of all recollection of pain and the production of perfect unconsciousness of anything having happened.

The patient very often appears to feel, and will flinch when the knife is first applied; but this I consider to be the effect of reflex action, and not an indication to press the chloroform. In some operations, especially those about the rectum, though the patient be well under the influence, we always meet with some inconvenience from these reflex actions. A case which I had the other day in dental surgery is a good illustration of sensation returning before the brain becomes conscious of what is going on. I was called to give chloroform to a lady for the extraction of ten teeth. I got her slowly but thoroughly under its influence knowing it must take some time to remove so many teeth, and that the inhalation could not be renewed on account of the mouth becoming full of blood. The first five were extracted without the slightest movement, but as the operation proceeded, sensation returned, and I was obliged to use considerable force to keep her in the chair during the extraction of the last tooth. She came to herself very shortly after, and was delighted to find that she had got over all her trouble—to use her own words, "without having felt it the least in the world."

Now, it appears to me that, if the operation is a very slight one, the minimum amount of anæsthesia necessary to produce the effect ought to be the great aim of the chloroformist. Dr. Snow used to consider that, with his apparatus, from three to four minutes was sufficient to bring the patient under the influence of chloroform, but I think six or seven is much nearer the mark. I attribute the comparative safety of the inhaler, over a sponge or handkerchief, to the much less rapid introduction of the poisonous vapour into the blood, in consequence of its large admixture with common air; whereas with the sponge or handkerchief the effect is much quicker, and the dilution of the vapour a matter of great uncertainty. Much more congestion is produced, from the circulation not having had time to accustom itself to a foreign vapour, and the danger to life is greatly increased. We must all consider the introduction of chloroform as one of the most important discoveries of our age, and a great blessing to suffering humanity, by removing all the horrors of operative surgery; but at the same time there is some risk, and a vast uncertainty in the effects produced on different constitutions, of which there are no means of judging beforehand. It is only by constant practice and experience that we become familiar with the varied symptoms that occur, and know how far we may press chloroform with safety to our patient. I will illustrate this by a case I had at St. George's only a few weeks ago.

A pale cachetic woman, aged twenty-seven, was admitted under the care of Mr. Tatum, with malignant disease of the knee-joint. She had been confined only three months before, and was nursing her baby up to the day of admission. On her being placed upon the table, I proceeded to administer the chloroform. She had no fear, and seemed to take it very well for about three minutes, when I was alarmed by the total insensibility of the eye and by the breathing being slower than natural. I placed my ear to her chest and found the heart fluttering, though the pulse at the wrist was to be distinctly felt. I was confident, from former experience, that it would not be prudent to continue the inhalation of the chloroform any longer, notwithstanding the state of the pulse and the general opinion of those round the table, who thought there was no danger. I requested Mr. Tatum to begin the operation. The patient seemed slightly sensible; the pulse became weaker and weaker, till it could be scarcely distinguished. I immediately had recourse to stimulants: cold water was dashed freely upon the chest, and as much wine as could be got down was given, but the power of swallowing was very imperfect. The faintness continued for some time after the operation, and it was half an hour before she could be removed with safety from the theatre. On her return to the ward she was sick, and brought up the wine that had been administered. She was totally unconscious of the operation, and had no bad symptoms afterwards. The stump healed kindly, and she left the hospital on the 23rd of June.

I believe that in this case, had I continued the exhibition of the chloroform, the result would have been very different. The woman, weakened by the disease as well as by suckling, had no doubt a weak, flabby heart, though auscultation gave no sign of a diseased state either of its valves or muscular structure. And it is especially in this class of cases that the chloroformist is called upon to exercise the utmost vigilance and care. I could relate several cases of a similar nature from my experience of nearly four thousand patients to whom I have administered chloroform; and the only case of death that has occurred in my practice was one that proved fatal in consequence of this morbid condition of the heart. I will just give the leading features of the case, which will be found reported more at length in The Lancet of May, 1854. The patient was a pale, cachectic woman, aged thirty-seven, with chronic mammary tumour. She had been an out-patient for many months before admission, and was in a very weakly, nervous state. She was kept in the hospital a fortnight, to prepare her by rest and good diet for undergoing the operation. On coming into the theatre she was extremely nervous, and expressed great dread of the operation. I had only been about a minute and a half giving her chloroform, with the valve of the apparatus not more than one-third closed, so that the amount of the vapour inhaled must have been very small. I repeatedly asked her to breathe naturally, and not in the spasmodic, gasping way she was doing; but when I found there was no alteration, I took off the mouth-piece. The lips were livid and the mouth was open, and I found she had fainted. I immediately had recourse to restoratives—cold water dashed over the body, cold air, ammonia to the nostrils, artificial respiration, and galvanism,—which were continued for a considerable period, with no good effect. The woman died almost immediately. The post-mortem examination disclosed nothing more than a small and slightly fatty heart: a few feeble inhalations of the chloroform, added to great fear, had been sufficient to paralyze its action. Dr. Snow analyized some of the blood and portions of the viscera, but could not find a trace of chloroform, so he did not admit it as a death from chloroform.

Another point of very considerable interest in the administration of chloroform is the state of the stomach at the time of inhalation. If chloroform is given on a full stomach, there will be much greater congestion of all the important organs, in addition to the sickness that follows, which is sometimes most troublesome. No food ought to be taken for three hours at least before an operation; but, on the other hand, the system must not be reduced to a state of exhaustion by too long fasting. I remember a case that made a great impression on me. It happened to a genleman, a member of Parliament, to whom I had given chloroform twice before; but on this latter occasion he took it at ten o'clock in the evening, on his return from his parliamentary duties. He had made a good luncheon at two o'clock, previous to his going to the House of Commons, where he had spoken for a long time, and got much excited. He had been told on a previous occasion to eat nothing for three or four hours before the operation, which advice he religiously followed, for he had fasted since his lunch eight hours before. He was a strong, powerful man; but the chloroform, on this occasion, had such an effect on his exhausted system that I had great apprehension as to the result; he was a long time before he recovered from the effects of the chloroform, and was then seized with a succession of fainting fits for two hours, and no sooner had one ceased than another supervened. In the intervals he was quite sensible, apologizing for keeping me, and declaring he felt quite well; and it was nearly one o'clock in the morning, and after I had plied him well with brandy-and-water and biscuits, that I felt I might leave him with safety. I was pleased to hear the next morning that he had slept well, and was none the worse for the chloroform. I have since been very careful that my patients have not been kept too long without food.

These cases will represent the principal dangers I have met with in the administration of chloroform—a branch of practice to which I have paid great attention ever since its introduction. To sum up, they may be divided into three heads:—

1st. Errors in previous treatment, principally in respect of food: where the patient has been kept too long fasting; or, on the other hand, has been allowed to take food just before the operation.

2nd. Injudicious management of the chloroform—that is, introducing it too rapidly, or pushing it too far.

3rd. That state of system in the patient which is found associated with a weak, flabby heart.

The first error, in all ordinary cases, may be avoided by common care.

For the judicious management of chloroform, some previous practical acquaintance with its administration is essential, especially in operations which threaten to be protracted. If space permitted, I could give many cases in which sufficient anæsthesia has been maintained for very long periods without any bad effects.

As to the third class of cases, I will only remark, that in the present uncertainty which exists as to the physical signs of those conditions of the heart, we cannot expect always to diagnose them; but, I believe, by habitual care in the use of the chloroform, combined with that facility in appreciating danger which is acquired by practice, and by the prompt use of stimulants when danger does occur, the ratio of accidents may in future be greatly diminished.

Brook-street, July, 1858.

REPORT OF A CASE IN WHICH INDUCTION OF PREMATURE LABOUR WAS SUCCESSFULLY PRACTISED, IN THE CASE OF A DWARF WITH DISTORTED PELVIS.

By Edmund A. Kirby, M.D., &c.

Early in January, I was requested to visit A. S——, a respectable married woman, who I was informed was pregnant with her first child, and who expected her confinement to occur between the 17th and 23rd of March. On calling at the house on the following day, I was surprised to find my patient to be a person of extremely diminutive size—a dwarf, in fact, whose height was only forty-two inches, about the ordinary height of a child five years of age, of fair complexion, and of decided strumous diathesis. I learned from her that she was twenty-seven years of age, and had been married twelvemonths; that her father died of consumption, and that she had several brothers and sisters, who, with the exception of one sister, aged twenty, whose height is only fifty inches, were not remarkably small. During infancy she was afflicted with rickets, and it would appear that her stunted growth and diminutive size were partly owing to the ill-developed and distorted state of her osseous system; but I should think not entirely so, for the sister above alluded to, although an exceedingly small woman, is well proportioned and apparently free from disease.

As it was obvious that there existed considerable distortion of the pelvis as well as of the spine, I obtained permission to examine them particularly, with a view to discover if the distortion was of a nature to obstruct the progress of natural labour. The following are the measurements which, with the kind assistance of Mr. Coster, I took at that time. A straight line drawn down the spinal column from the last cervical to the union of the last lumbar and first sacral vertebræ measured fourteen inches. This portion of the column described three curvatures—two lateral, one being to the right and the other to the left, and one angular forwards. The extreme of the lateral curvature occurred at the fifth dorsal vertebræ, and that of the left at the last; the former measuring two inches, and that of the latter one inch and an eighth out of the perpendicular. The angular curvature involved the whole of the lumbar and last dorsal vertebræ, the bodies of which are thrust forwards, downwards, and to the left, and occasion the curvature of one inch and seven eighths. The pelvis is small and contracted in all its measurements, slightly flattened from before backwards, the promontory of the sacrum and last lumbar vertebræ projecting forwards to the pubes, and thereby narrowing the antero-posterior diameter of the brim *to rather less than two inches and a half*. The cavity and outlet presented no point of particular interest.

From these measurements, which were taken with great care, it will be seen that the birth of a living child was not possible if the labour was delayed until the full period of gestation; nor could she then have been delivered without resorting to that dire and repulsive operation, craniotomy. Therefore, with the concurrence of Mr. Coster, I determined to induce labour at the seventh month, but at this time she had an attack of sub-acute bronchitis, which compelled me to delay doing so for a fortnight.

On Saturday, January 30th, my patient had as nearly as could be ascertained completed her thirty-third week of gestation, and was so far recovered from bronchitis that it was thought inexpedient to incur the risk of further delay. Induction of labour was now commenced by administering decoction of ergot in ounce and a half doses every four hours.

In less than thirty-six hours after taking the first dose, uterine contraction was set up, but although the pains were persistent and severe, no perceptible impression was made on the os uteri until the evening of Wednesday, Feb. 3rd, when I found it soft and dilatable. Her general health during this time has been good; the bowels had acted regularly; tongue clean; appetite good; pulse quick and full. Nourishing diet allowed; ergot to be continued.

Thursday, Feb. 4.—The patient says that she has been in strong labour all night, and thought she should have been obliged to send for me. Os uteri dilating favourably; it now readily admits the finger; tongue clean and moist; pulse 120; appetite and spirits good. Continue ergot; bowels to be relieved by castor oil.

Friday 5th.—Very fatigued; complains of want of sleep; pulse 125; tongue not so moist as on the preceding day; os dilating slowly, but satisfactorily. Ordered to take tincture of opium, thirty-five minims; rest enjoined; ergot to be omitted.

Saturday 6th.—She has had some sleep between her pains, and is much relieved; has taken a good breakfast, and is in excellent spirits. Dilatation of the os had progressed most favourably, and I was enabled to pass two fingers within the cervix, and cautiously separate the membranes as far as I could conveniently reach. Repeat anodyne draught at bed time.

7th.—On visiting my patient with Mr. Coster this morning, we found that she had had but little sleep during the night, and that the uterus contracted vigorously at intervals of four or five minutes. The os was soft, moist, and well dilated; her general symptoms were much the same as on the preceding day, the pulse continuing 120. Owing to the protrusion of a large bag of fluid the presentation could not be made out satisfactorily, while the membranes remained entire; but as no further advantage could now be gained by preserving them, I at once ruptured them, and sought to determine the presenting part, which I found to be *the elbow, the child laying transversely, the shoulder resting on the brim of the pelvis.*

Such a presentation under any circumstances is most perplexing, but under the special circumstances of this case was peculiarly embarrassing, and left us to decide upon adopting one of two courses, either of which would obviously be attended with difficulty. The first was to raise the shoulder, and bring the head into proper relation to the brim, and to wait for the efforts of Nature; and the alternative was to turn, and to endeavour to deliver at once. In consultation it was determined to adopt the latter course, and having taken the usual precautions, I proceeded to accomplish the object we had in view. This, however, was not easily done, owing to the smallness of the parts, the contracted state of the brim, and the bulging forwards of the bodies of the lumbar vertebræ. At length, having possessed myself of the feet of the child, I was enabled to turn and bring them down; but when the head reached the brim, there was a delay of some minutes. The resistance here was considerable, the umbilicus ceased to pulsate, and the life of the child depended on its immediate delivery. Having taken care to adapt the head to the brim of the pelvis, it required firm and continued traction to dislodge it; but when this was done, it swept over the floor of the pelvis, and passed the outlet without unusual obstruction.

The child was born apparently lifeless, but after a few minutes a faint pulsation was restored to the cord, and, by means of the prone and postural respiration, the heart and lungs were soon brought into full play, and we had the satisfaction of handing to the nurse as lively a baby as could be desired. The time employed in the delivery was about twenty minutes.

Returning to my little patient, I found her somewhat exhausted and complaining of faintness; the uterus, however, was contracting firmly, and there was no hæmorrhage; the placenta was removed from the vagina, into which it was expelled, and some warm brandy-and-water administered. I left her an hour after delivery, expressing herself "quite comfortable."

Suitable after-treatment was prescribed, and both the parent and child improved daily; at the end of the second week, the mother was walking about her room; and, at the end of the fourth, she returned to her usual avocations without having once evinced a single bad symptom. In consequence of the delicate state of the mother, I thought it prudent to recommend her not to nurse her child, and a good breast of milk was provided for the infant, on which it thrived exceedingly well.

It will be well to mention, that the quantity of ergot taken from the Saturday evening to the following Friday morning, amounted to two ounces and a quarter; and the pulse, which it will be observed was abnormally high throughout the labour, appeared to be due more to mental excitement than to her physical condition.

Remarks.—The preceding case furnishes an excellent example of the value of induction of premature labour, and gives encouragement for its more general adoption in cases not only of extreme distortion, but where the disproportion between the fœtal head and that of the brim of the pelvis is such as is pretty sure to involve the necessity of resorting to craniotomy at the full period of gestation. Rare, indeed, must be the cases in which the distortion is greater, or the attendant circumstances more unpromising, than in the one I have here related. Such an interference, however, with the ordinary process of nature cannot but be objectionable, not to say hazardous, and can only be justifiable when employed to correct, so to speak, an error which Nature herself has made, and, as a choice of evils, must be regarded as considerably the lesser.

That children are sacrificed to craniotomy which might be saved by the induction of premature labour, there can be no doubt; but unfortunately the obstetrician is too frequently ignorant of the necessity of the one until it is too late to effect the other; but when he is consulted, as is more frequently the case in a first pregnancy, at the sixth or seventh month, and he has reason to suspect a disproportion to exist, surely the responsibility rests with him if he allow it to attain a growth which involves the sacrifice of its life, and jeopardizes that of its mother.

It is worthy of note, that in this case ergot *originated* uterine contraction; and although the labour was induced by its agency, yet no ill effects were produced on the child; and this is the more important to observe, because, had the membranes been ruptured for the purpose of inducing labour, and consequently before the os uteri had dilated, it is more than probable that the child would have been lost, and the mother's sufferings greatly increased. Indeed, I believe the success of the operation, so far as regards the child at least, to depend on the preservation of the integrity of the ovum until the first stage of labour be completed; and in premature labour whether induced or not, as in natural labour, the time occupied in this stage is of little importance, provided the membranes remain entire. If in natural labour it is desirable to preserve them from rupture, how much more so must it be in labour that is induced six weeks or two months before the ovum is matured or the uterus prepared for its expulsion?

Euston-square, 1858.

OBSERVATIONS ON THE ARCUS SENILIS, OR FATTY DEGENERATION OF THE CORNEA.

By Edwin Canton, Esq., F.R.C.S.,

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> " *Old age*, considered as a state of the system, *is*, in fact, with very few exceptions, *fatty degeneration*. The terms may be considered almost synonymous. In the *aged* we look for it; and its gradual, imperceptible invasion neither surprises nor alarms us. In the *young* it is that much-to-be dreaded, mysterious disease—premature old age; which has been the theme on which the *descriptive* powers of many an author have been exerted, but on the *pathology* of which but little light has been thrown until recently."—B. Lee. M.D.: the Symptomatic Value of the Arcus Senilis; with a tabulated statement of seventy-two cases. "The American Medical Monthly," Sept. 1856. p. 161.

PART X.

Fatty and Calcareous Degeneration of Cartilage in association with the Arcus Senilis.—I propose, in the following observations, to consider certain structural alterations which are taking place in the bodies of the aged in connexion with the formation of the senile arches and their gradual coalescence into circles; and, subsequently, to adduce evidence of a series of parallel changes occurring in those who have become prematurely old. I should experience some difficulty, however, in the adoption of any particular order whereby to arrange my subject, but that analogy suggests a consideration in the first place, of the cartilaginous tissue—an analogy which, in respect of the textures, cornea, and cartilage, may be thus stated:—They enter into the composition of, so-called, cavities, and are firm and resistant, but withal, flexible and elastic; a large number of nucleated cells exists in both;* each in its earlier, or formative stages, is vascular, but becomes wanting in blood-vessels, subsequently—being now dependent for completion of growth and continuance of nutrition, on the copious arterial supplies immediately adjacent; no lymphatics are discernible in either structure, though physiology and pathology lead us to infer their presence in both;† cornea and cartilage are in close contiguity with fluid and fibrous tissue, and cornea, like cartilage, yields *chondrin*‡ on boiling.

Whilst drawing the above parallel, I am not unmindful of certain points wherein cornea and cartilage differ,—dissimilarities, however, which do not affect the position here assumed, inasmuch as modification of function often necessitates modification of structure in tissues which are otherwise closely allied. The cornea is said to possess an intra-nervous supply, whereas no nerves are traceable within cartilage; the inter-cellular substance of the former is translucent and fibrous, whilst that of the latter is opaque and homogeneous. Cartilage is supported by bone; not so, however, the cornea, at least in man, though in many fishes, reptiles, and birds, osseous plates are set into the anterior part of the sclerotica, and which, in extending themselves forwards, constitute a ring that ceases on junction with the circumference of the cornea.[*]

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* Vide Virchow, in Verhandlungen de Physik-med. Gesell. in Würzburg, b. ii., p. 150, Erlang., 1851. Strube Der Normale Bau der Cornea und die Patholog. Abweichungen in Demselben. *Diss. inaugur.* Würzburg, 1851. W. His, Histologie der Cornea, Basel, 1856.

† It is true that some anatomists have succeeded in injecting what they conceive to be plexuses of lymphatic vessels in the cornea, and in the umbilical cord: but it has not been satisfactorily shown that the injection, in these cases, had passed into the lymphatics. I have seen lymphatic vessels distended with their own lymph on the surface of an eye which had repeatedly suffered from chronic inflammation; but, in this case, the vessels appeared to be in, or immediately beneath the conjunctival membrane."—Sharpey and Ellis: Elements of Anatomy, vol. i. p. 230. Lond., 1856.

‡ See Müller, in Poggendorff's Annalen., vol. 83, p. 513. "In its natural structure, consisting of cartilaginous laminæ and mucous membrane, the cornea is analogous to the articular ends of bones, in which the dense cartilage is covered by synovial membrane. Both are prone to ulceration, and the process in both exhibits this peculiarity, that no granulations are seen, and no pus is formed. It appears as a simple process of absorption."—W. Lawrence: Treatise on Diseases of the Eye, p. 358, 3rd edition. London, 1844.

It is to the changes taking place in the true cartilages of the ribs and larynx that I have directed more particular attention. These parts are well known to become ossified to a greater or less extent as age encroaches, whilst the period at which the alteration commences, and the rapidity of its progress, will in a great measure depend on those *general* circumstances that are acknowledged to influence the accession, and regulate the course, of senile metamorphoses in other organs of the body. Certain causes, however, of a *local* character in many instances induce a premature ossification of these structures, as when phthisis laryngia brings in its train this condition of the thyroid and cricoid cartilages, or the perichondrium is irritated from without by the continued pressure of a bronchocele. "The cricoid and thyroid cartilages," observes Dr. Williams,[†] "naturally become ossified in advanced life, but chronic laryngitis of two years' duration produces the same change in young persons. This is in conformity with a law, well developed by Andral, that a certain degree of irritation accelerates in tissues those changes to which time would naturally bring them."

Particular cartilages of the ribs may undergo this bony conversion before age has arrived to harden them, where they lie in the vicinity of diseased portions of lung or pleura, and it is a matter of almost familiar observation, that in cases of phthisis the costal cartilages are prone to become thus altered. Otto[‡] remarks:—"Extensive ossification of the cartilages of the ribs, especially in the form of little bony plates and scales in the membrane of the cartilages, I found common, particularly in *consumption*, and also in tubercular disease." Andral[§] says:—"It has been observed that in phthisical patients the cartilages of the ribs and larynx are prematurely ossified, and I have myself remarked the ossification of the nasal fossæ and the surrounding periosteum in glandered horses." Lastly, I shall take occasion to point out, that in many instances where fatty degeneration affects prematurely various other organs of the body, as the eye, the heart, the arteries, &c., it is not infrequently to be found that the cartilages I speak of have shared in the same change, and in many parts have become *ossified*, or, in other words, have suffered the *calcareous degeneration*.

"The changes of natural degeneration, observes Mr. Paget,[‖] "have a direct importance in all pathology, because they guide us to the interpretation of many similar anomalies, which, whilst they occur in earlier life, we are apt to call diseases, but which are only premature degenerations, and are to be considered therefore as methods of atrophy—as defects, rather than as perversions of the nutritive process, or as diseases only in consideration of the time of their occurrence."

Ossification of the costal cartilages is very generally regarded as one of the attributes of age, and we are accustomed to consider the extent to which this change has proceeded as a measure, in some degree, of the years a person shall have attained to. The same observation applies equally to this condition of the laryngeal cartilages. It must be borne in mind, however, that such alterations of texture have not unfrequently been found to be very tardy in their progress, and calcareous degeneration of these parts is discovered, after death, in some remarkable instances of longevity, to have affected the true cartilages to a comparatively small extent, only. Thus, Harvey,[*] in his account of Parr, who died at the age of 153, states that, "in raising the sternum, the cartilages of the ribs were not found harder, or converted into bone in any greater degree, than they are in ordinary men; on the contrary, they were soft and flexible." In connexion with this peculiarity, the additional observation of Harvey (p. 591), with respect to the state of the viscera, is of the highest interest: "All the internal parts, in a word, appeared to be so healthy that, had nothing happened to interfere with the old man's habit of life, he might, perhaps, have escaped paying the debt due to nature for some time longer." Chaussard[†] states that Reil has seen the costal cartilages unossified in a man of a hundred and thirty years of age.

With regard to the state of the skeleton of the larynx in the aged, I may here mention that I found all cartilages composing it, with the exception of the epiglottis, affected by calcareous degeneration to no greater extent than I have frequently seen them to be at the age of fifty, in the instance of a man who died at the age of 103, and who, until the period of his death (which was due to an accident), had enjoyed an almost uninterrupted immunity from disease. The viscera in this man, too, were healthy.

Before indulging in such reflections as the above and other similar cases suggest, I shall endeavour to describe the general and histological characters presented by ossification of the parts now especially referred to. And first of the *costal cartilages*. They become bony sooner in the male than in the female, and the one attaching the first rib is thus changed earlier than the others. Those of the false ribs are the last in the series to ossify. The ossification takes place both within the cartilages and at their surface, though the rate of progress of the change is quicker in the latter than in the former situation, where the calcareous material is, at first, laid down in larger and smaller nodular portions; whereas, beneath the perichondrium, it is most frequently lamelliform.

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[*] Some extinct creatures, too—*e. g.*, the ichthyosaurus—possessed these sclerotic ossicles.

[†] Library of Medicine, art. "Laryngitis," vol. iii. p. 48.

[‡] Compend. of Human and Compar. Pathology, translated by South, Note 25, p. 206. Lond. 1831.

[§] Treatise on Patholog. Anatom., transl. by Townsend and West, vol. i., p. 368. Lond. 1829.

[‖] Lectures on Surgical Pathology, vol. i., p. 97. London, 1853.

[*] Works, Syd. Soc. edition, p. 590.

[†] Recherches sur l'Organization des Veillards. Diss. Inaugural. p. 23. Paris, 1822.

I have been frequently struck with the symmetry of this conversion, as regards the two sides of the thorax, and it has recalled to mind a parallel observation made by Bizot,[*] in respect of the arterial system when affected with fatty and calcareous degeneration. The analogy is rendered closer still on my finding that those portions of the cartilage which have not as yet suffered, but are closest to the neighbourhood of the bony transformation, have also become, to a great extent, affected by fatty degeneration.

When ossification of the costal cartilage is complete, the bony matter becomes identified with that of the corresponding rib; but there is commonly a surface-line, or groove, to mark the point of junction with the sternum. The first rib, however, frequently presents an exception to the latter part of this observation. It is remarked by Kölliker:[†] "The ossification is sometimes more limited, sometimes more extensive. In the former case, it does not proceed further than the incrustation of the cartilage-cells, and of the matrix in which they are lodged, which has become fibrous; in the latter, and frequently also in the former, the ossification is preceded by the formation of hollow spaces in the cartilage, in which is deposited a cartilage-marrow containing vessels which are connected, in part, with those of the perichondrium, in part with those of the ribs; and the osseous substance is more that of normal bone, though almost always more opaque, less homogeneous, with imperfectly-formed lacunæ, which frequently contain a calcareous deposit. Under the name of *cartilage-marrow* are understood the medulla-cells, fat-cells, bundles of connective tissue and vessels which are presented instead of the detritus afforded by the disintegration of cartilage, and which may be said to correspond in all respects with those of the fœtal bone, and may be readily seen in ossifying costal and laryngeal cartilages." With respect to the lacunæ, I may state that when the ossification is completed, I find that not only are they, with their canalicula, often well formed, but we may, not uncommonly, see them arranged with that regular concentric disposition which characterises ordinary bone, and with the innermost circle enclosing an Haversian canal. Many lacunæ, however, are scattered about in an irregular way, and present very variable forms; whilst not a few are to be found retaining, yet, an embryonic condition.

With respect to the fibrillation of the matrix, this is by no means of unusual occurrence in other hyaline cartilages where morbid processes occur in them; and in the case of those of the ribs, whether ossifying prematurely or with the progress of age, it will be observed that though they now approach closely in texture and chemical compositions to the fibro-cartilages, there is want, nevertheless, of that peculiar reticulation of structure which characterises the latter, and in place of it the fibres—which are exceedingly fine and numerous—are arranged very closely together, except where their course is interrupted by the presence of the cells, and their direction often is straight or slightly undulatory. "The distinction," observes Dr. Hassall,[*] "of cartilages into true and fibro-cartilages, although useful for the purposes of classification, is to some extent artificial, since, on the one hand, some of the true cartilages, as old age approaches, become converted into fibro-cartilages, and, on the other, the fibro-cartilages themselves, in the early period of their development, do not contain fibres, the cellular tissue being hyaline, and identical with that of true cartilage."

There is also another change in the condition of the matrix, which may not unfrequently be observed where the costal cartilages are undergoing ossification—viz., a finely granular state. The hyaline substance is here seen to be minutely mottled, of a darker hue than natural, and the tint, when a somewhat thick section is examined under the microscope, will be seen of a light brownish-yellow. This must not be confounded with the molecular, calcareous particles closely crowded together, and laid down within the cells themselves as one of the more immediate stages of the ossifying process; for frequently these cells are completely charged with their contents, and, in their now close aggregation, individuality becomes lost, and a deep brown hue and coarsely granular character are conferred upon the confused collection of them.

I shall now describe, more particularly, the condition of those cartilage-cells which I have already referred to as presenting fatty degeneration; but may pause to remark that in the ossifying costal cartilages, and also in those of the larynx, we have an excellent opportunity afforded us of studying *in a single specimen, at the same time, the four forms of degeneration—viz., the granular, the fibrous, the fatty, and the calcareous.*

In observing that the cells are to be seen in a state of fatty degeneration in association with the calcareous change which the cartilages are at the same time undergoing, it must be borne in mind that, normally, these cells contain a large quantity of fat, and Kölliker[†] remarks—"In the adult, every cell, except the most superficial, contains larger or smaller (from 0·0016—0·008), sometimes spherical, sometimes more irregular fat-drops, which frequently so surround the nucleus as entirely to conceal it from view, whence it has been assumed, though not quite correctly, that the fat is seated in the latter." In a state of fatty degeneration the oil-drops are to be found more numerous, or single and of larger size, than natural, and very often included in a congeries of pigment granules, which occupy with the former to a great extent the cavity of the cell. At the same time the cell-wall becomes more or less thickened, or often disappears entirely, so that the parent cell seems to be charged with a collection of oil-drops and pigmental particles. "The nucleus," observes Wedl,[*] "undergoes no determinate pathological change: it simply disappears."

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[*] Mém. de la Soc. d'Observation, vol. i., p. 338

[†] Manual of Human Histology. Syd. Soc. Transl., vol. i., p. 319.

[*] Micros. Anat. of the Human Body, p. 268. Lond. 1849.

[†] Loc. cit. vol. i., p. 118.

Cartilage in the above state is of a dirty-brown colour, with its usual amount of elasticity greatly impaired. In the examination of thin sections it may frequently be noticed that in many places the cohesion between the cell-wall and the containing matrix is so loosened that from the margin of the specimen the cells here and there project freely and are almost detached; while in the body of the preparation empty spaces will be found, which have become such from the falling out of the cells that had formerly filled them. These points may be observed in matrix which is yet hyaline.

Another peculiarity is, that in the immediate neighbourhood of cells which are presenting different phases of degenerative change there may be often seen numerous, much larger, and more closely crowded cells than are to be found in normal costal cartilage. Each one of the progeny occupying such cells will commonly be found to present a large oil-globule in its interior. Lastly, it will be noticed that an early step in the actually ossific transformation is the deposition of innumerable calcareous granules in the interior of the individual cells—first, towards their circumference, and as, by degrees, this deposit increases in amount, the cell-wall disappears from around it, and, with the complete filling up of the cavity, the previously contained oil likewise becomes wanting. We are thus enabled to verify the observation of Meyer,[†] who, in speaking of the two ways of ossification of cartilage, says:—"In all those cartilages which are bones in the adult, the intercellular substance becomes earthy before the corpuscles; but, where centres of ossification are deposited in the nasal, thyroid, and costal cartilages, or the fibro-cartilages, the reverse of this process is the case."

Before leaving, for the present, the subject of these changes in the costal cartilages, I may incidentally remark that similar alterations occur in these structures in some of the lower animals—alternations which have been recognised and commented on both by ancient and modern authors. Thus Vesalius[‡] observes: "Superiorum verò costarum cartilago durior est, solidiorque, ac in valdè senibus intus ossea efficitur; quemadmodum in ovibus et bobus aliisque ferè omnibus ejus generis animantibus mediocris ætatis fieri cernimus, quorum cartilago intus friabili constat esse, exterius tantum cartilagine veluti membrana quapiam obvoluto. Atque id etiam in simiis et canibus utpote sicciori temperie quàm homines constantibus adèo est manifestum, ut haud mirum est. Galenum[§] illorum præcipère animalium fabricam docentum, verarum costarum, cartilagines, osseas; spuriarum autem cartilagines, exquisitas esse cartilagines scripsisse." Amongst modern writers, it is stated by Gerber[*]: "The ossification of the costal cartilages, which occurs in the domestic mammalia, especially the *horse*, although incomplete, may still be reckoned as normal, for it takes place invariably. In the full-grown horse, the costal cartilages are always found more or less bony. The same thing is observed in the middle-aged dog, and probably it occurs constantly amongst the carnivora."[†]

(*To be continued.*)

REPORT OF A CASE OF HERNIA, STRANGULATED WITHIN THE ABDOMEN, SUCCESSFULLY OPERATED ON.

By Thomas Tatum, Esq., F.R.C.S.,

SURGEON TO ST. GEORGE'S HOSPITAL.

J. F——, aged thirty-nine, a greengrocer, robust, and rather corpulent, of temperate habits, and usually good general health, excepting for the last four months, during which time he has suffered much from symptoms of dyspepsia, accompanied by great depression of spirits and disturbed nights, was seized, on the evening of the 15th of March, after having partaken rather hastily of veal for dinner, with abdominal pain and vomiting. The bowels were relieved during the evening. He was seen by a medical gentleman the same night, who prescribed calomel and aperients, and also visited next day several times, but there was no amelioration of symptoms, and at half-past nine, Mr. Allen, of St. John's Wood, was sent for to see the patient. He found him very low, and the abdominal pain at times very severe, accompanied by vomiting. On examination he found a tumour in the right inguinal region, slightly red, and extremely painful to the touch: it was in close connection with the testis. On the left side there was a large soft, irreducible hernia, evidently omental, which also involved the testis. On finding the part so painful, Mr. Allen ordered the patient to lie upon his back, and to elevate his legs at an angle of forty-five degrees, and press against the wall, with the constant application of ice to the part, and the following medicines:—Calomel, eight grains; opium, one grain; make into two pills, one to be taken immediately, the other in three hours. Bi-carbonate of potass, four scruples; syrup of orange-peel, half-an-ounce; hydrocyanic acid, (Scheele's) eight minims; water, five ounces and a half: mix; one-fourth to be taken every four hours, with a tablespoonful of lemon-juice in a state of effervescence.

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[*] Rudiments of Patholog. Histology. Syd. Soc. transl., p. 185.

[†] In Muller's Archiv., 1849, S. 292—357.

[‡] Anatomia, p. 66. Venet., 1604.

[§] "Galen is the writer whose works contain by far the most anatomy of all the ancients. He has given a much more complete anatomical account of the human body than any of his predecessors, or even successors for a thousand years after. There can be no doubt that he dissected the bodies of the inferior animals. But Vesalius, the first of the moderns who ventured to call in question his infallibility, affirmed that he had never dissected a human subject; and this seems to be now the general opinion, particularly of Haller and other learned physicians of the art."—Chalmers, "Biographical Dictionary."

[*] Elements of General and Minute Anatomy; translated by Gulliver, p. 177. London, 1842.

[†] "The costal cartilages receive depositions of osseous matter as the horse advances in life, until, at length, they acquire rather the character of spongy, friable bone than cartilage."—W. Percivall: the Anatomy of the Horse. p. 12. Lond., 1832.

"Dans la vieillesse, plusieurs des cartilages s'ossifient entièrement, et se soudent avec les côtes."—J. Girard: Anatomie des Animaux Domestiques. p. 142. Paris, 1807.

March 17th.—Seven A.M.: Visited by Mr. Allen, who found the symptoms much the same, with the addition of hiccup; there was no pain on pressing the hernia, and the discoloration had disappeared, and on gentle manipulation the bowel was returned, but it did not go back with the usual gurgling sound.—Eleven A.M.: Symptoms still the same. I was sent for by Mr. Allen, and we met at a quarter past twelve. I ascertained from the patient that hernia had existed on the right side for seventeen years, and that he wore a truss for it, and it could always readily be returned. The hernia on the left side was caused in early life by an injury from the tread of a horse; this had varied but little from its present condition. His pulse was 108; countenance composed; tongue moist, and tolerably clean; hiccup constant; vomiting frequent, and of a dark grumous character; no pain or tenderness in the abdomen under any amount of pressure, nor was there any flatulent distention of the bowels. There was the large irreducible hernia on the left side, containing omentum, and probably of the congenital kind; while on the right was the testis, rather less than its natural size, with its tunic containing fluid, but not distended. The cord was not enlarged, but since the return of the hernia, the testis was observed to be slightly dragged upwards. The case was obscure; though there was no pain or tenderness, the patient referred to the right side as the cause of his symptoms, and I found that by pulling on the cord of that side, I occasioned some pain. Still there were few of the characteristic symptoms of the return of hernia "*in the mass*;" and from the account of it by Mr. Allen, I considered it was a congenital one, or, perhaps one of the infantile kind, which having descended with its sac into the tunica vaginalis, had, with its sac, been returned. The symptoms could scarcely be said to be urgent, nor did they seem to indicate that insidious form of peritonitis which creeps on, almost without symptoms, to a fatal end, as these cases usually occur in persons rather advanced in years, or of broken constitution. I thought the bowels might yet act if further means for that purpose were adopted: it would be time enough to proceed to other measures should they fail, so we ordered two grains of calomel every four hours; warm bath, and an injection of gruel, with castor oil, Epsom salts, and tincture of assafœtida.—Three P.M.: Symptoms much the same, although the bowels were partially relieved after the enema.—Eight P.M.: We met again, and agreed to continue the powders during the night, and another injection to be thrown up. Mr. Allen saw him twice up to two A.M., the symptoms continuing the same, hiccup and vomiting being very distressing. He left instructions that he should be sent for during the night should the symptoms become worse.

18th.—I met Mr. Allen by appointment at eight A.M., and found the patient had had a bad night. Hiccup had been constant, and vomiting recurred frequently. Upon examination I found there was still no pain or tenderness of the abdomen, not even at the ring; but on making traction of the cord, there was a slighter degree of tenderness. It was then resolved that an operation, of an exploratory character, should be made without any further delay. With this view I began my incision a little above the external abdominal ring on the right side, and carried it down for about three inches into the scrotum, and having exposed the cord, I separated its component parts to look for the canal of the unclosed tunica vaginalis, which I expected to find; this soon appeared in the form of a pellucid cyst, of a rather dark colour, but very flaccid. On opening it freely, about an ounce and a half of dark-coloured serum escaped, and the finger could be passed down to the testis below, and also through the abdominal ring above. On dividing the canal up to the external ring, I was enabled to introduce my forefinger into the abdomen, and with its point I could just touch what appeared to be the lower part of a knuckle of distended intestine, to reach which it was necessary to enlarge the opening which I had made; this I did by extending my incision upwards and slightly outwards, dividing some of the fibres of the tendon of the external oblique, and was thus enabled to introduce two fingers to a considerable distance, and to find a large knuckle of bowel in a very distended state, but still too distant to lay hold of. It became necessary, therefore, to extend the incision still further, which was done in the same direction, dividing the internal ring, and some of the lower fibres of the internal oblique and transversalis muscles. The opening thus made gave me room enough to introduce three fingers, with which I could now lay hold of the portion of intestine, and draw it down through the wound. It proved to be a strangulated coil of small intestine, ten inches long, of a deep red colour, with ecchymosed patches on the surface. On pulling upon the protruded bowel, and introducing my finger, I found that it was lightly constricted by the omentum, which was loaded with fat, and through an opening in which, either natural, or caused by adhesions, the intestine had found its way, and become strangulated. The stricture was very tight; at first I could only introduce my nail under it, but by degrees I got the end of my finger through, and I hoped to be able to dilate the opening sufficiently to return the protruded bowel, but as the stricture was dense and hard as ligament, I found it impossible to do so, and as I could not draw down the omentum, I introduced a wide director on my finger under the stricture, and with a blunt-headed bistoury I freely divided it. This, happily, was not followed by any hæmorrhage. I therefore proceeded to return the gut back through the enlarged aperture. This I found extremely difficult to do, for as fast as I returned a portion, a great volume escaped, and it was only by patience and good assistance that I was able to return the whole; but had the intestines generally been distended with flatus, I think it more than likely that I should not have succeeded in restoring the displaced bowel without having recourse to acupuncturation to give exit to the flatus, as in a case I described on a former occasion,* in which a large opening through the abdominal parietics had been made, and the protruded bowel had, with difficulty, been put back. The head of the colon, on account of the size of the opening, rotating upon its short meso-colon, escaped towards the close of the operation, and was not returned without the usual difficulty attending the reducing of this part. All, however, was satisfactorily replaced; no hæmorrhage of any amount occurred, one small artery alone being tied. The edges of the wound were brought together by sutures, and dressed with a compress of several folds of linen, and fixed by a spica bandage. The patient underwent the operation without chloroform, as Mr. Allen did not consider him an eligible patient for taking it, and felt very little fatigue or the worse for the operation.—One P.M.: Two copious liquid evacuations passed; the patient felt greatly relieved, but the hiccup still continued.—Three P.M.: We met in consultation, and found the patient as follows:—Pulse 130; skin hot; tongue white and loaded; no pain. Ordered the following pills: Chloride of mercury, two grains; opium, one grain—to be taken immediately; and two hours afterwards, another composed of one grain of calomel, and half a grain of opium, every two hours.—Nine P.M.: Patient much the same; hiccup very distressing; pulse feeble, but quick. Ordered the following mixture:—Sesquicarbonate of ammonia, twelve grains; essence of peppermint, twenty minims; camphor mixture, five ounces and a half; compound spirit of sulphuric ether, two drachms: mix one-fourth every four hours. Mr. Allen saw the patient every two hours after the operation, up to two A.M.

19th.—Nine A.M.: I met Mr. Allen in consultation, and we found the patient had had a bad night, the hiccup being very troublesome, and he was very low; abdomen distended; tongue white and loaded; skin hot; pulse 130 and wiry; pain in right hypochondriac and iliac regions, and tenderness on pressure. Ordered the application of ten leeches, and afterwards a large linseed poultice, and the following draught and powders:—Battley's sedative solution, thirty minims; spearmint water, one ounce and a half; to be taken immediately. Calomel, four grains; powdered loaf sugar, four grains; mix into four powders, one to be taken every three hours.—Nine P.M.: The symptoms much relieved; great flatulence; no evacuation of the bowels; much depression. A rue enema was given, and a draught of ether and ammonia ordered every three hours.

20th.—Nine A.M.: The injection had procured two copious evacuations, with much escape of flatus, from which much relief was felt. Pulse 120, soft and compressible; vomiting had ceased, but the hiccup continued with but slight intermissions.—Nine P.M.: Symptoms of bronchi pneumonia have come on in the right lung with much severity, together with slight delirium tremens, symptoms of which have shown themselves ever since the opiate draught of yesterday. Pulse soft and quick; tongue white and flabby. Vinegar of cantharides was applied between the scapulæ and over the chest; two active aperient pills were administered, and the calomel omitted.

21st.—Two A.M.: An enema was given, which was followed by two evacuations; hiccup recurring slightly at intervals; pulmonary symptoms severe, with considerable depression. Ordered the following mixture:—Decoction of senega, five ounces and a half; chloric ether, one drachm and a half; distilled vinegar, half an ounce: mix, a fourth part to be taken every four hours. Beef-tea to be given frequently. Vesication kept up over the chest with the vinegar of cantharides. By these means the symptoms were subdued, though we considered our patient in great danger for a day or two. The wound in the meantime proceeded most favourably, and appeared to be healing by the first intention.

22nd.—Sutures removed; wound nearly closed.

24th.—The patient was so far recovered, and the wound so nearly healed, that I took my leave.

Mr. Allen has since informed me, that on the 26th, some symptoms like gout came on, and that the wound opened and suppurated, leaving a small sinus; this, however, closed after some days under the pressure of a truss with a broad pad, and the patient resumed his usual occupation.

There were many instructive points about this case, such as the ambiguous signs of strangulation; the loose, large, irreducible hernia on the left side, which was justly considered to be in nowise connected with the symptoms; the absence of pain or tenderness on the right side, or any other symptom than the slight pain occasioned by traction of the testis, to indicate the seat of the stricture. Also, the absence of bleeding, after dividing the stricture in the omentum, which, had it occurred, as I fully expected it would, might have proved very troublesome, and the vessels would not have been secured without much difficulty. Then the attack of bronchitis with pneumonia, and slight delirium tremens, in which depletion could not be resorted to, but which happily yielded to extensive counter-irritation and stimulating expectorants; and, lastly, the long and obstinate continuance of hiccup, which did not entirely subside for a week, from the first symptoms of strangulation, and which at last yielded more to the effects of the vesication than anything else. These, and other minor points, rendered the case sufficiently interesting and anxious.

George-street, Hanover-square, 1858.

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* Medico-Chirurgical "Transactions."

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

JULY—AUGUST.

SIR C. LOCOCK, M.D., BART., PRESIDENT.

ON A CASE OF EXCISION OF THE ELBOW-JOINT, IN WHICH A CONSIDERABLE LENGTH OF BONE WAS REMOVED. BY JOHN TUDOR, ESQ., M.R.C.S., SURGEON TO THE SEAMAN'S HOSPITAL. (Communicated by GEORGE BUSK, ESQ., F.R.S.)

THE patient was a Lascar seaman, a native of Bengal, aged twenty-four, who was admitted into the hospital July 31st, 1857. The left elbow-joint was completely destroyed, and surrounded with pus, while motion was attended with a distinct rough grating sensation; the general condition of the man being unfavourable. His health having improved very much, resection of the joint was performed in the following manner, on the 26th of August:—A longitudinal cut being made on the inner side parallel with the ulnar nerve, and carried to about four inches in length, was joined by a second incision extending transversely across the back of the joint from one condyle to the other. The olecranon being removed by the bone forceps, so extensive an amount of disease of the humerus was revealed as to necessitate the prolongation of the longitudinal incision to the extent of a further inch and a half, and the removal of fully three inches of the lower extremity of the bone. The head of the radius was then excised within its capsular ligament, with about three-quarters of an inch more of the ulna. The case progressed favourably. The man was exhibited to the Society at its meeting on May 11th, when the arm was found to have regained considerable strength; so much so, indeed, that underhanded he could lift a heavy chain and carry a bucket. When allowed to hang loosely by the side, the interval between the extremities of the bones did not appear to exceed half an inch, but when flexed they could be brought into close approximation, and it could be felt that the humerus was much expanded, so as in a great measure to compensate for the natural condyloid extremity as a base of support, while a corresponding osseous growth on the ulna might be regarded as respecting the olecranon. It was thus proved that at least five inches of bone might be removed in excision of the elbow-joint, and, nevertheless, an efficient member retained, with an articulation capable of useful and extensive motion. (The portions of bone removed were exhibited to the Society.)

Mr. Spencer Smith exhibited to the Society the portions of bone removed from the elbow-joint of a man in the Middlesex Hospital by Mr. de Morgan, which in curiously minute particulars most closely resembled those in Mr. Tudor's case, save that the portion of the ulna was not quite so large. The case was going on equally well, but the operation having been performed on the 10th of December only, and the patient having had to contend with the healing of a large pectoral abscess, the pulse-joint was not so strong as in Mr. Tudor's case.

Mr. SKEY, whilst admitting that in the elbow-joint excision was more apposite than in any other joint of the body, and that the amount of success had been great in proportion, considered that, as at present there was a great leaning in favour of resection, it would be well that the rules regarding the operation should be more clearly defined. He inquired of the author of the paper whether there was evidence before the operation of the case being one of necrosis rather than of disease of the joint itself, and whether it was necessary that portions of the radius and ulna should be extensively removed. Seeing Mr. Fergusson present, he would inquire of him, as the highest authority on this matter, whether it was necessary, in cases of excision of the elbow-joint, to remove the articular surface of the bones of the forearm, or, as a general rule, whether he would not be content to remove only the portions of the humerus that were diseased.

Mr. FERGUSSON considered it probable that the disease in the elbow-joint in this case might have been secondary, that necrosis of the lower end of the humerus might have existed, and the inflammation consequent upon this extended to the joint, forming a formidable disease of the articulation. He thought the author of the paper had performed the best operation that could be in the case. His own experience went to show that it was better for the patient that the opposing articulating surfaces of a diseased joint should be removed at the same time. He said that the operation of resection of the elbow-joint had been performed so frequently, that little remained to be known about it. The surgeon could, of course, modify his incisions at will in any given case. He defended the practice of excising joints in proper cases.

Mr. SKEY was anxious that great care should be exercised in the selection of cases for resection, especially by young surgeons—a care which he thought in some instances had not been employed.

Mr. TUDOR had not expected, when he commenced the operation, to have to proceed to so great an extent as he afterwards found to be necessary; but he deemed it safer, on finding the amount of disease to be so great, to remove the bones as he did.

ON A CASE OF HYDATIDS OF THE TIBIA. By WM. COULSON, ESQ., F.R.C.S., Surgeon to, and Lecturer on Surgery at, St. Mary's Hospital.

THE patient, a female, aged twenty-five, was admitted into St. Mary's Hospital on the 20th October, 1857, with a swelling of the size of an orange in the front of the right leg, just below the tuberosity of the tibia. In the centre of the swelling there was a small ulcer, and the surrounding integuments were red and swollen. The discharge, which was not considerable, was found to contain acepholacysts. It appeared from her history that eight years previously the patient had received a kick on the front of the right tibia a little below the insertion of the ligamentum patellæ, which injury was soon followed by a swelling which increased in a gradual and steady manner until it attained the size of a hen's egg. Slight pain attended the growth, but no great inconvenience until four years ago, when the pain becoming severe, the tumour was frequently blistered with relief, but the swelling remained in much the same condition until the beginning of August last, at which time it first gave way spontaneously, and matter containing acephalocysts was discharged. The anterior wall of the tumour, containing a large hydatid about to escape, was removed with the saw and bone forceps, and a cavity exposed, which extended within half an inch of the knee-joint and two inches or more down the shaft, and from which a considerable number of hydatids were removed. The whole of the cavity was lined by a white glistening membrane. After removal of all the hydatids to be found, Mr. Coulson rubbed the lining membrane of the cavity freely with solid nitrate of silver, and filled it with cotton wool. The woman was discharged on the 5th of February, with the wound nearly healed.

Mr. Skey spoke of the difficulty of diagnosing diseases of bone, particularly of the tibia. He related the case of a child which had come under his care some time since. The patient had a considerable swelling of the upper end of the tibia, near its head. This gradually increased in size for seven years, until it attained an enormous magnitude. The motion of the knee-joint, however, remained perfect. The cavity was laid open, and was found to contain upwards of a pint of enchondromatous matter. The walls of the tibia were as thin as a sheet of paper. The cavity was filled with lint. The limb was restored in about eighteen months, the walls of the cavity having fallen in, and the bone become solidified. The operation had been performed two years and a half ago; the patient was seventeen years old at present; and in a year or two would, no doubt, have a useful limb.

Mr. Obré had seen the case related by the author, and could confirm his description of it. At first it was supposed that no echinococci were present, but they were distinctly seen afterwards.

On a Case of Fibrous Polypus of the Urinary Bladder; with Observations. By John Birkett, Esq., F.R.C.S., Surgeon to Guy's Hospital.

The new growths developed in the bladder may be thus described:—

1. Papilloma.
2. Fibrous polypus.
3. Villous growths.
4. Epithelioma.
5. Carcinoma, and infiltrating and tuberous.

It is upon the second class that the author desired to concentrate attention. This growth resembles in every anatomical particular the "nasal polypus," which is the true type of the disease. These growths occur very rarely, and the author can find only ten cases, the description of which accords with that about to be given. Warner, Baillie, Walter, Crosse, Savory, Chopart, and Petit, each relate a case, and to these three others are added. A girl, five years of age, came under his (Mr. Birkett's) care, in Guy's Hospital, in December, 1857. She was in a most cachectic state; and her mother said she had been ill about two months. At that time she complained of pain in the hypogastric region, which was soon followed by dysuria, and at last retention of urine. A catheter was used to relieve this difficulty. When admitted the urine dribbled away; but unless a catheter was introduced, the bladder became immediately distended. The urine was ammoniacal, contained mucus and blood, and was very offensive. The constitutional powers of the patient were much reduced; but after nutritious diet and tonics, the child's powers rallied, and she became a little stronger. In order to examine the bladder with more care the patient was placed under the influence of chloroform, and then the contracted bladder was discovered to be filled with a solid growth, a portion of which had dilated the urethra, and protruded between the vulva. A ligature was applied around the pedicle of the protruding portion, which eventually sloughed off. Some days after this the patient became very ill, and died on the twenty-fifth day after admission.

Necropsy.—Suppuration in right kidney, dilated ureters and pyelitis. The walls of the urinary bladder were hypertrophied, and its cavity was dilated. Attached to the anterior wall of the viscus and the meatus, were pedunculated growths, which had dilated the meatus, and protruded through it. These consisted of delicate fibre tissue covered with epithelium. The progressive stages of the disease were next alluded to, and the cause of death in this, as well as in other cases of a like nature, traced to irritation excited along the track of the urinary mucous membranes. Remarks were then made upon the differential diagnosis of this disease, and those known by the name of "vascular fungus," "epithelioma," and "medullary cancer;" and it was observed that, while in polypus little or no hæmorrhage occurred, bleeding, on the contrary, was diagnostic of the other growths. From calculus these growths might be distinguished by the absence of sound. A foreign body might be detected in the bladder by the sense of touch, but it could not be sounded. In reference to treatment, the morbid specimens demonstrate that very little hope can be entertained of doing good by surgical interference; but when practicable, a ligature might be safely placed around the pedicle of the growth. The paper was illustrated by drawings of the morbid specimen in its fresh state, as well as by two preparations of the disease itself.

Mr. Coulson believed that the tumours mentioned in the paper had been described by some authors as villous growths, some of which are of a non-malignant and others of a malignant kind, the former being by far the most rare. He would not now allude to symptoms of tumours in the bladder; but assuming that the existence of a growth had been determined, an important practical point arose—whether the tumour was of a malignant character. Considering the frequency of malignant growths in the bladder, he thought the differential diagnosis could be made out. In malignant growths the symptoms manifested themselves more suddenly, with pain and hæmorrhage; the pain also was more deeply seated, as the malignant tumours usually grew from the discs, whilst the non-malignant had their origin near the neck. The hæmorrhage likewise was more severe, continuing during the progress of the disease and exhausting the patient. But there was another point of still more importance, to which he (Mr. Coulson) first called the attention of the profession in 1848, and the accuracy of which had been confirmed by the observations of Dr. Rees and others. He alluded to the microscopical examination of the urine of the *débris* which it contained, in which cancer cells could be discovered. In these cases, even the blood passed exhibited a different appearance. As regarded the treatment in malignant cases, it could only be of a palliative kind, to lessen pain and restrain the hæmorrhage; in the non-malignant cases the propriety of interference must depend on the circumstances of each particular case, but the results of the operations had not been hitherto of an encouraging kind.

Mr. **Fergusson** spoke of the importance of the subject discussed, and said that he should have been glad if the author had been more distinct in his account of the cases detailed—as to the.r occurrence in males and females, and in young or old persons. He (Mr. Fergusson) had frequently met with large masses, like those described, connected with the prostate gland in the operations for stone. These he sometimes returned into the bladder, but occasionally they came out as readily as the stone itself. In some instances they were found to be attached by a very thin pedicle, and could be removed with comparative facility. In one instance the tumour, consisting of the enlarged middle lobe of the prostate, was quite isolated and surrounded by the mucous membrane of the bladder. It caused great difficulty in micturition, from which the patient suffered more than from the symptoms of stone. After the stone was removed, he took away the projecting portion of the prostate with the lithotomy forceps. He related a case in which a patient died with all the symptoms of stone. After death a small projection was found in the neck of the bladder, appearing to grow from the prostate gland, and to be surrounded entirely by mucous membrane. It was attached by a thin pedicle, and when the patient wanted to pass urine it dropped into the neck of the bladder. If a surgeon could diagnose such a case, he thought he would be justified in making an incision as in the operation for stone, and removing the offending body.

Mr. **Henry Thompson** called attention to the broad distinction which existed between that rare form of tumour described in the paper and those tumours commonly called "villous." The first, or fibrous polypus were simple protrusions at first of the mucous membrane, and were to be met with occasionally in various parts of the body in connexion with that membrane. Their mode of formation was particularly described by Rokitansky. On the other hand, the villous tumour was, as its name indicated, truly a villous structure, precisely resembling the villi of the chorion, and it was an extremely interesting fact that there existed this homology between the diseased and healthy structure. None of these had any title to the term "malignant" in its ordinary sense. They were wholly unrelated to cancer, and caused death, not by infecting the system or involving neighbouring parts by their ravages, but simply by producing hæmorrhage. Each minute villus was a vascular body of a delicate kind, which was easily ruptured, and permitted bleeding to take place. With respect to Mr. Fergusson's remark relating to the removal of pedunculated tumours from the bladder, he was quite satisfied that in most of those rare cases in which they did exist their presence might be verified by careful sounding during life.

Mr. **Birkett** replied, and said that the disease he had described was altogether different from the villous tumour; it was not malignant. During twenty-five years' experience in Guy's Hospital he had never seen a single case of anything like a portion of the prostate being drawn away with the forceps.

Researches on Gout. By A. B. Garrod, M.D., Physician to University College Hospital.

The author divided his communication into two parts: in the first were detailed the results of his analyses of the urine in the different forms of gout; the second was devoted to the consideration of the influence of the different forms of colchicum upon the urinary secretion. After describing the method of analysis employed in arriving at his results, and speaking of the opinions usually held upon the subject of the urine in gout, Dr. Garrod proceeded with the first part of his paper, the cases in which he subdivided into three classes.

1st Class. Cases of acute gout, occurring in patients most of whom in the intervals of the attacks enjoyed pretty good health. About thirty analyses for uric acid made on the twenty-four hours' urine of several different patients were detailed, and a few for the determination of urea; and from these the following deductions were drawn. In the earlier stages of acute gout, the urine, for the most part, is small in quantity, and the uric acid, measured by the twenty-four hours' secretion, diminished; that this acid is thrown out in much larger quantities as the disease becomes mitigated, and that these amounts, even above the patient's daily average, may be passed, forming sometimes critical discharges; and, lastly, the acid again becomes lessened, although not to the extent which occurs either just before or at the commencement of an attack. That the urea is usually thrown out in about the normal quantities, although its free elimination by the kidneys is often somewhat impeded, and, in consequence, the blood contains a small excess, which may possibly explain, in some measure, one peculiarity of gouty inflammation when it attacks superficial parts—namely, the presence of œdema and the subsequent desquamation of the cuticle. That occasionally a trace of albumen exists in the urine, but very seldom, compared with its occurrence in the chronic forms of the affection.

The 2nd Class included cases of chronic gout, the majority of which were not suffering from any urgent symptoms, but many were afflicted with some of the sequelæ of the affection, as shown by the concretions of urate of soda upon different parts of the body, and the stiffened condition of the joints. More than sixty analyses for uric acid were given in this class, made upon the day's urine of fourteen different individuals, and numerous determinations of urea were also detailed. The deductions from these observations may be thus summed up:—The urine in chronic gout is usually rather pale in colour, below the average tint in the healthy subject, of low density, and increased in quantity. The amount of urea, except in extreme cases, the same as in health (due account being taken of the diet of the patient at the time the urine passed). The uric acid was very much diminished indeed, and subject to excretion in very varied quantities at different times; and, lastly, the presence of a small amount of albumen is exceedingly frequent. Deposits in the urine are not of common occurrence in these subjects; but they occasionally occur on the cooling of the fluid, sometimes in the form of urate of soda or ammonia, at other times crystallized and more or less coloured rhombs of uric acid.

Class 3.—Urine of individuals who had suffered more or less frequently from attacks of acute gout, of varying degrees of intensity, examined at the time of complete freedom from any symptoms of the disease. Several determinations were made on the urine of six individuals, and the following results arrived at: In no one of the six patients' urine did the amount of uric acid reach the quantity usually considered to be the average in health; in most of them it was far below, and it would appear that the kidneys in such individuals are apt to lose some of their excretory power for this body, a circumstance which must necessarily render the blood impure, and account for the liability which such patients possess to periodic visitations of this malady, and the great difficulty of effecting a radical cure of the disease.

Part 2.—Devoted to an examination of the influence of colchicum upon the urine. The usual opinions held by different authorities, as Christison, Chelius, &c., upon the modus operandi of this drug were first related, and many of the analyses brought forward in their support were shown to be very fallacious, the error arising not from any fault in the analyses themselves, but from small specimens of urine, passed at particular times of the day, being examined, and no account taken of the twenty-four hours' elimination. Between fifty and sixty analyses, showing the amount of the uric acid eliminated, were given, together with numerous determinations of the urea. The results of these observations on the action of colchicum were as follows:—

In one case, where no gouty affection existed and no febrile disturbance was present, colchicum appeared to have the effect of slightly diminishing the quantity of urine, and likewise of diminishing somewhat the excretion of uric acid.

In a second case, similar to the above, the influence of the medicine was notably to diminish the quantity of urine, the uric acid being slightly increased, but the increase was less than a quarter of a grain per diem.

In case 3, a gouty patient recovering from an acute attack, the uric acid was somewhat increased during the administration of colchicum, but not in a greater degree than frequently occurs under such circumstances when no medicine is given.

In case 4, both the urine and the uric acid were diminished by the influence of the drug; and so on for the other cases.

The author considered, as the results of his analyses—

1st. That there is no evidence to prove that colchicum produces its effects upon the system by causing the kidneys to excrete an increased amount of uric acid, but that, in fact, the reverse would seem to hold good.

2nd. That colchicum is not always a diuretic, but often diminishes the renal secretion, especially when its action is exerted upon the alimentary canal.

3rd. That colchicum has no marked influence on the excretion of urea.

An appendix to the paper contained the results of seventy-two analyses, performed on consecutive days, of the urine of a gouty patient; and the results exemplified in a marked manner the peculiar mode in which uric acid is frequently eliminated in such cases, and also tended to confirm the conclusions arrived at with respect to the action of colchicum upon the excretion of this principle.

Observations relating to Excess of Diet as a Cause of Disease, and on its Connexion with a hitherto unrecognised Hypertrophic Condition of the Lungs. By D. F. Rennie, M.D., Royal Artillery, Surgeon to the Convict Establishment in Western Australia.

In this paper the author stated that he was first led to an investigation of this subject on entering upon his duties as surgeon to the Convict Establishment at Freemantle, in June, 1853, by noticing a remarkable prevalence of cutaneous eruptions and other affections which were entirely confined to the convicts, the explanation of which he discovered in their excessive diet, which consisted, amongst other articles, of 27 ozs. of bread, 16 ozs. of fresh meat, daily, some of the men being allowed even more, and each prisoner had also a daily allowance of ½ oz. of tobacco. It was noticed, that the re-convicted prisoners, who had less diet and no tobacco, suffered far less than the general body of the prisoners. It appears that defective means of restraint was, in a great measure, the cause of this great allowance of food being continued by the convict authorities, on the ground that it facilitated their control by moral force. In December of the same year, ophthalmia and dysentery began to appear, and these, too, only amongst the prisoners, and for the most part taking the place of the cutaneous diseases, leading to the inference that they were mere local varieties of a general constitutional disorder, and, in most instances, were cases of pure metastasis of the cutaneous eruptions. The troops and population generally were entirely free from these complaints, so that there could be no reasonable doubt that they originated in the diet being in excess of the systemic demand; and it must be borne in mind that from October to May the temperature in Western Australia is almost tropical. Under these circumstances, he (Dr. Rennie) made strong remonstrances on the subject; but the convict authorities being unable to comprehend the scientific principles involved in the adaptation of diet to climate, and taking as a precedent the very large diet given in the English prisons, as well as being strongly prepossessed against any reduction of the scale on disciplinary grounds, received his suggestions unfavourably. The result was, that during the year 1854, with a daily average of 706 prisoners, 2921 cases of sickness occurred, of which 1058 were treated in the hospital. Another urgent appeal was then made by Dr. Rennie, in which all the scientific bearings of the subject were fully discussed; and though the convict authorities still continued to oppose his views, Governor Fitzgerald ordered a medical board for the consideration of the question. This board, of which the principal medical officer was president, completely bore out the correctness of Dr. Rennie's objections to the diet, and recommended a gross weekly reduction of 136 oz. The reduction scale came into force on the 1st of June, 1855, and the results proved increasingly satisfactory, as there was abundant evidence by statistical tables to show. Dr. Rennie, having arrived at the conclusion that the immediate cause of disease amongst the convicts in this colony was an excess of food operating on men with impaired constitutions, and consequently with impaired powers of digestion, devoted himself to an inquiry into the physical cause, which he felt satisfied was developed previous to their arrival in that colony, and succeeded in identifying it with a hypertrophied condition of the pulmonary parenchyma, and a remarkably adherent state of the abdominal and thoracic viscera, generally unaccompanied by tubercular deposition, or any indications whatever of previous inflammatory action, and leading him to believe it to be a pure form of hyper-nutrition. The proofs and evidences which led to this conclusion were entered into at great length, as also the appearances, which, with few exceptions, were found in upwards of eighty post-mortem examinations. The portions of lung found most hypertrophied were the upper part of the right lung, and the lower portions behind. The lung tissue in these parts resembled the appearance described by Laennec as carnification, and at first the condition was viewed as one of chronic pneumonia, but this was disproved by the fact that it was present in nearly every case, and also that, almost without exception, the men so affected never had been, and were not at the time, affected with any symptom of chest disease. Dr. Rennie therefore attributed these abnormal symptoms and appearances to the prolonged operation of a diet too bulky and nutritious for the peculiar circumstances (hot cells and sedentary occupations) under which the convicts are placed during the earlier portions of their imprisonment in England. As the question has naturally presented itself as to whether these extraordinary appearances were developed before or after the prisoners landed in Western Australia, and with the view of ascertaining the condition of the respiratory organs, Dr. Rennie availed himself of the opportunity of examining upwards of fifty men immediately on their coming to shore, and in almost every case found a marked difference between the capacity of the two lungs for containing air, the functions of the right one being almost invariably most defective. In most cases there was, in addition, a general absence of healthy respiration, and, curiously, the more so in those men who had previously been totally free from chest diseases. All this, Dr. Rennie thinks, strikes at the root of the whole dietetic system pursued during the earlier period of their confinement in England, the state of these convicts with respect to sickness contrasting strongly with that of the inmates of the military prison, who have a simple, wholesome, and yet ample diet, and plenty of exercise in the open air; whereas the convicts, during the first twelve months of their imprisonment, are shut up like hot-house plants in a warm cell, employed at a sedentary occupation, and placed on a diet double that allowed to the military prisoners.

Dr. Webster remarked that Dr. Rennie had laid down some novel principles in his paper. He agreed with him in thinking that the prisoners to whom he referred received too much animal food; but much would depend upon whether they had any hard labour to undergo, in which case the bad effects of the too nutritive diet would be counteracted. He did not agree with the author in thinking that the prisoners of England were overfed. There was no class of prisoners so healthy as the criminals confined in London prisons, which he believed was greatly owing to the excellent diet. In Denmark the prisoners received no beef, but were given horse-flesh instead, and their health was very good.

Dr. Murchison said that the diseases to which the prisoners in Australia were subject were probably of a tubercular nature, and occasioned by their close confinement.

Dr. Baly observed that the diet of the prisoners had been several times reduced, and was now assimilated to the diet in English prisons. Dr. Rennie desired a still further reduction, but this was not permitted. He (Dr. Baly) could not agree in the conclusions of the author, who did not appear to be a careful observer. He did not believe that dysentery and constipation were produced by over-feeding. With regard to the admissions to which reference had been made, they were not more frequent in convicts than in persons of the same class who died in hospitals, except so far as they might be produced by tubercular disease; and when that disease was discovered in the convict, it was well known that an addition to the food would often arrest it. The author's account of what he had denominated hypertrophy of the lungs was, he believed, incorrect, and he (Dr. Baly) regretted that such a paper should have been read before the Society.

On a Case of Obstruction of the Bowels, caused by an Adventitious Band constricting the upper portion of the Ileum, for the relief of which Gastrotomy was performed; with Observations leading to an early Discrimination and Appropriate Management of Analogous Conditions. By Joseph Ridge, M.D., F.R.C.P., and Alexander Anderson, A.M., F.R.C.S.

The patient was a youth aged sixteen, with well-formed limbs, but the false ribs on each side flattened. His attack commenced with two loose motions at night and one in the morning, after which colicky pains supervened. Mr. Anderson was called to him in the evening, and found the abdomen rather depressed, and retracted below the level of the navel. Pressure did not produce much or any pain, except in the eighth iliac region. Five grains of calomel and of the soap-and-opium pill were prescribed, and followed next morning by a carminative draught, with rhubarb and sulphate of potash, which was vomited, as well as all else taken. He had at times very severe pain, with sensations of rolling in the intestines, and attempted to pass dejections, but in vain. The pills were repeated, and succeeded after two hours by a tablespoonful of castor oil, which was also thrown up, and afterwards the food, partially digested and mixed with bile. Distressing pains recurred at intervals in the bowels, and frequent calls to stool, without any other effect than the passage of flatus per rectum. A drop of croton oil was given; three grains of calomel and of the soap-and-opium pill, and two of Barbadoes aloes, were ordered every third hour, and warm water injections. After extreme suffering from the intestinal pains, with nausea and faintness, he vomited a large quanty of brown and very offensive matter, and felt greatly relieved. There had been further unavailing inclinations to stool. Pain on pressure extended to the umbilicus, and he was bled from the arm to about sixteen or twenty ounces. The abdomen was covered by a mustard poultice. Two grains of calomel and three of the soap-and-opium pill were ordered every sixth hour, and he was restricted to small quantities of water. Soon after the visit he brought up a good deal of fluid, from the colour and odour of which there could be no doubt of its having come from the intestines. Tenderness persisted, with sounds of flatulent movement. An enema of tobacco came away with much fæces.

Dr. Ridge now saw him, and it was agreed to administer as large an injection as possible of warm water by the aid of a tube introduced far up the bowel. The fluid returned with some feculent matter, which the authors considered might have existed in the colon before the occurrence of obstruction. The extent to which an abundance of water passed, a painful intumescence, a little above and to the right of the umbilicus, the flatness and softness of the abdomen below its line, led them to believe that the large intestines were free—that the obstacle was seated at a superior part of the ileum, near the spot described. He was greatly exhausted, and allowed a wineglassful of beef-tea, the same quantity of milk with lime-water, at alternate intervals, should the stomach bear well that amount of supply. Injections of gruel and olive oil were ordered in quantities that could be retained.

The amount of urine excreted showed that a great portion of the ingesta by the mouth and rectum got into the circulation. Flatus was still discharged downwards, but there had been no appearance of stercoraceous matter. Subsequently, a chocolate-coloured fetid liquid was cast up, and had evidently ascended from the small intestine. Nutrition was, therefore, attempted by injections alone. Abdominal pain increased; and fearing lest peritonitis should arise, and the time for rescue or relief by operation pass away, it seemed a judicious experiment, prior to such a formidable proceeding, to permit the intestine to receive gradually nutritive fluid, in order to watch results that might be more hopeful, or assist further in determining the completeness and mechanical character of the impediment. Small quantities were taken from time to time until the following morning, when augmented local fullness and suffering ended in vomiting of the like fluid, that may be said to have been distinctive of the upper portion of the ileum, and fixed the resolution of the authors to open the cavity, rather than leave him to the probabilities of a distressful death from an unrestored alimentary passage.

Mr. Anderson, assisted by Mr. Erichsen, performed the operation whilst the patient was under the influence of chloroform, at a temperature as near to 70° as possible, and on the seventh day of the seizure.

On dividing the peritoneum, turbid serum escaped. The contracted intestine was traced until it was found girt by a band close to the right of the spine, somewhat above the line of the navel. While tearing the cord, fluid was felt to pass through released gut from the dilated bowel, which looked more like the cæcum than a portion of the ileum, and there was some difficulty in replacing the intestine from its having become distended. Mercury and opium were continued in the vain hope of controlling the peritoneal inflammation already manifested by the observed effusion, and the rapid pulsation of the turgid arteries of the exposed intestine. Nutriment was retained by the stomach and rectum, but death occurred after twelve hours, without nausea or any particular distress having appeared.

The small intestines were found agglutinated by a thin coating of recent lymph. The upper third of the ileum remained dilated, and its coats were darkly congested, thickened, and œdematous. Contents escaped through perforations of the compressed part; the surrounding tunics were thin, soft, diaphorous, ready to burst from innutrition, without the ordinary appearances of slough or gangrene, as shown by the preparation, which also exhibits one end of the band attached below the stricture. The omentum, passing from left to right, was drawn down and adherent to the mesocolon, near the cæcum, by an old fibrinous effusion. Some mesenteric glands were enlarged, and, with his youthful age and defective chest, threw additional light on the origin of the peritoneal adhesions, as being derived from scrofulosis, which was viewed as a separate and not unfrequently an occult source. He had often complained of abdominal uneasiness during the two previous years, and sometimes of costiveness with colic, suddenly terminating in profuse loose motions, and complete relief. On more than one occasion he had been discovered bent on his knees and elbows in bed, to lessen sufferings probably connected with relievable and reducible obstructions variously caused by the plastic organizable exudations and their subsequent contraction. The passage of flatus per anum was regarded as in some measure diagnostic of incarceration, or of imperfect occlusion by a crossing band, or cause acting in the way of pressure rather than of ligature, and prognostic of a slower progress, and death without hiccup or signs of mortification, all of which, including particularly speedy collapse, might be equally significant of strangulation by a ring or opening, productive at once of entire closure, and a more rapid course and termination.

If the mode of invasion suggest the class of internal mechanical obstructions referred to in the paper, and aperients by the mouth being avoided, the whole extent of the colon be made manifestly free by the descent of copious enemata unmixed, the fluids vomited belong physiologically to the part above the suspected point of arrest, accumulation, and antiperistaltic action, the abdomen would be most advantageously opened immediately; or a confirmation of the diagnosis might be sought, and spontaneous relief favoured, through an absolute prohibition of food, both solid and liquid, by the stomach, which is the most important principle of treatment and of reduction at the onset of the symptoms. After the subsidence of sickness and nausea, of local distension, vascular fullness, and accessions of pain, effected by such means, the trial may be conservatively instituted by a cautious admission of unirritating fluid aliment into the stomach. Being followed by results similar to those exemplified, a proper period for surgical aid might still be evinced sooner, and more safely before and after operation, than has hitherto appeared to render it justifiable for the removal of obstruction, and, if possible, the sources of its recurrence, or for the formation of an artificial anus. This could be determined upon only at any portion of the small intestines on seeing the state of the parts. The simpler operation of puncturing the dilated bowel by a trocar passed directly through the abdominal walls might be attended by greater risks than gastrotomy, except under some peculiar circumstances, where there were indications and appearances at a particular spot of the parietes. Even then careful incisions with the scalpel would be less hazardous, if a lancet evacuation of an abscess communicating with the intestine should not be alone required to hasten another natural outlet, to be closed on a possible restoration of the canal.

On a Case of Premature Puberty. By R. B. Smart, Esq., M.R.C.S. (Communicated by R. Quain, Esq., F.R.S.)

Mary D——, a girl born in Manchester, in January, 1853, had an appearance of hair on the pubes, followed by a menstrual discharge at the age of three years and six months. None of the assigned exciting causes of early puberty could be traced. She seemed to be generally out of health before the first occurrence of the catamenia, but has since become strong and well, the menses recurring with perfect regularity up to the time of observation. She is now (May, 1857,) three feet seven inches in height, and weighs fifty-two pounds. Her general appearance is wonderfully like that of an adult female of short stature; her bust is full and womanly; the breasts large and prominent, with the characteristic glandular feel on manipulation; the nipples are well developed, and the veins of the breasts much marked. Rather from the abundance of fat over all the body than from the size of the bones, she is wider across the hips than other children; she has a distinct forward curve in the lumbar spine; the hair on the pubes is light brown, and about an inch in length; the external parts of generation have very much the conformation of an adult. In intellect the child is backward; her disposition is lively but obstinate; there is no positive indication of sexual propensities.

The case has a table of measurements, in which the proportions of this child are contrasted with those of her sister, who is a year and eight months older than herself. This sister is shorter, and weighs nearly a stone less than the subject of the paper, and many of the measurements are in excess in the younger girl, especially the girth of the body and limbs. Photographic portraits of the case represent at a glance the chief peculiarities. The writer of the paper has given a table of references to other similar cases published in England, and makes some comments on the points which are of interest to the physiologist.

HARVEIAN SOCIETY.

Dr. Hamilton Roe, President.

Dr. Handfield Jones read a paper

ON THE THEORY OF ELIMINATION IN THE TREATMENT OF DISEASE.

The author remarked that in reference to numerous diseases in which we had more or less certainty of the presence of a *materies morbi* in the blood as the efficient cause of the symptoms, there was a marked tendency shown by many practitioners to regard the phenomena as of eliminative character, and to shape in some instances their practice accordingly. It was contended that in cases of poisoning by drugs or venomous reptiles the kind of treatment found beneficial was not eliminative, but such as opposed the morbid agency; and also it was shown that if the vitality of the organs was vigorous, many poisons could be resisted and prove innocuous, although they were certainly imbibed. The phenomena of the exanthemata, of fevers, of malarious disorders, of syphilis, of skin eruptions, boils and carbuncles, and, lastly, of rheumatism, were examined with a view to the elucidation of the subject, and particular reference made to the therapeutic treatment found most effectual. The conclusions which the author arrived at were contained in the following propositions:—

1. In the majority of instances in which we have reason to believe that a morbid material has entered the blood, and is affecting the system injuriously, it is vain to think of expelling it by any therapeutic efforts. Nature must be left to deal with it as she will, and the only direct aid we can give her in this process is to admit pure air as freely as possible, so as to favour the pulmonary exhalation.

2. We are at the same time to watch carefully for opportunities of aiding Nature in her conflict. If reaction is excessive, we must endeavour to lessen it; if prostration threatens, we must support and tone; if secretions become morbid, they must be improved, and generally we must be on the look out to discover and meet any special requirements that may arise. If nature is equal to her task, we are to take care not to interfere with her.

3. There are several disorders (especially skin eruptions) which similate, so to speak, eliminative actions, but in which the morbid phenomena are capable of a different and better interpretation, and even the presence of a *materies morbi* is very doubtful. These are to be treated by endeavouring to quiet inflammatory nisus, to soothe nervous irritation, and to tone relaxed bloodvessels.

In the discussion which followed, Dr. H. Powell, Dr. Theophilus Thompson, Mr. Lobb, Mr. Ballard, Dr. Browning, the President, and Mr. Stewart joined.

Mr. C. Browning related a

CASE OF SUCCESSFUL TRACHEOTOMY IN CROUP.

John B. P——, aged two years and ten months, was attacked by a barking cough, with hoarseness, in April, 1857. The symptoms increased in June, after the child had been removed to a house infected by hooping-cough, and he was supposed to be labouring under that complaint. I was consulted on the 10th September, at nine A.M., when there was a high state of pyrexia, the pulse being quick, sharp, and firm; respiration was hurried and much impeded. The cough-sound was remarkably harsh and abrupt, resembling the bark of an angry terrier. The child had been thus affected three days; the nights were almost without sleep, and attended by frequent vomiting; and dyspnœa with wheezing was constant, and aggravated by the recumbent posture. Percussion and auscultation revealed no abnormal signs referable to the lung tissue or pleuræ, but the fauces and interior of the throat, as far as could be seen, were inflamed. I ascribed the urgency of the symptoms to tracheitis with some laryngitis, and immediately opened the jugular vein and took away between three and four ounces of blood; gave tartar emetic at short intervals *ad nauseam*, and calomel freely. Some relief was derived from these measures, and on my visit two hours after the bleeding I directed their continuance, with a dose of castor oil and a blister. At noon, however, the alarming symptoms had increased, the vital powers were declining, and respiration became more difficult and oppressed. The patient was aphonic, but sensible, and evinced the greatest distress from the rapid occlusion of the throat which was taking place. It was apparent that tracheotomy afforded the only chance of rescue from imminent death. I had anticipated the necessity of this procedure, and came prepared with instruments, and, assisted by my friend Mr. Norton, at once performed the operation. At the moment of inserting the canula there was an interruption to the current of air, from the pressure of the instrument and an accumulation of mucus and false membrane, that wellnigh proved fatal. The child became ghastly, livid, and breathless; the eyes were upturned and their pupils fixed, and life seemed gone; but as soon as the tube was fairly introduced into the trachea a deep sigh occurred, and then calm, gentle breathing, improved pulse and complexion, and soon tranquil sleep. From this time the case progressed most satisfactorily. The after-treatment consisted in a modified use of the remedies which have been mentioned, with the addition of small doses of

Dover's powder and of salines. The diet was chiefly farinaceous for a few days. It was necessary to withdraw the inner tube of the canula three or four times a day, in order to cleanse it from the inspissated mucus and shreds of false membrane by which it became clogged. The presence of these matters was quickly indicated by violent cough and difficult breathing, and if they had not been promptly removed would have led to suffocation. On one occasion, when the nurse untied the elastic neck-band, the whole apparatus was forcibly ejected from the wound. The tube was not required after the fifth day, and the opening closed readily. The child was convalescent after eleven days, and gradually resumed his ordinary food and habits. The voice remained raucous for some time, but in about a month regained its normal character.

There are two or three points of a practical tendency to which I would call attention. In this case we have a striking illustration of the injurious effects of indiscriminate *stuffing* and exposure to cold. The parents of the child believed he was suffering from hooping-cough, and that high feeding and bracing air were the chief remedies, gave him mutton-chops and porter, and studiously kept him out in the cold air. This was the course pursued up to the day before the attack, and no means could have been less suitable, as may be inferred from the effects, immediate and remote, of the antiphlogistic treatment, and the confinement to a proper temperature. The bleeding in particular, though not adequate to the removal of the mischief already done, doubtless contributed to mitigate the symptoms, and promote ultimate recovery. As far as my experience goes, the modern prejudice against the use of the lancet is calculated to throw too much into the shade this potent agent in conquering the acute inflammatory diseases of children; and I have found no mode of bleeding so speedy and advantageous as that of opening the jugular vein.

I need scarcely comment on the superiority of the double canula in tracheotomy, or upon the importance of great vigilance on the part of the surgeon as well as the nurse. The efficiency and quickness of the latter, in the subsequent management of the patient, are absolutely required. A few moments' delay in the removal of obstruction from the tube would be fatal.

Dr. Priestley exhibited the fluid from a

FALLOPIAN DROPSY.

The case was that of a lady who was supposed to be suffering from retro-flexion of the uterus. Dr. Priestley found, on examination, that there were two tumours behind the uterus, one of which, of a spindle shape, was the Fallopian tube distended with fluid, the other an ovarian tumour. Great discomfort was experienced by the patient after walking, the enlarged Fallopian tube becoming impacted behind the uterus. A small canula and trocar were passed into the tumour through the upper part of the vagina, and the fluid drawn off. The patient did well.

Mr. Henry Thompson read a paper on

THE DIAGNOSIS AND TREATMENT OF SYPHILIS IN ITS PRIMARY FORMS.

He commenced by demonstrating the importance of deciding promptly upon the nature of the primary forms of syphilis, in relation to treatment and prognosis, and stated that our knowledge of syphilis had greatly advanced during the last few years, thanks to numerous observers in this country and abroad; but that to Ricord the merit is preeminently due of having defined the great laws which its phenomena exhibit. Without giving his adhesion in every respect to all the dicta of that illustrious observer, the author of the paper asserted that a careful examination of the subject compelled him to declare his conviction, that on almost, if not on all important points, his doctrines were supported by the phenomena of syphilis in this country.

Primary syphilis was defined as a specific disease communicated by a virus, of which the earliest manifestation is a chancre: and secondary syphilis as a constitutional affection, which, excluding hereditary transmission, originates always from a chancre, and manifests itself by characteristic symptoms, which follow, with more or less regularity, a certain order of evolution.

Two distinct varieties, and two only, of chancre were stated to exist—the soft or non-infecting, and the indurated or infecting chancre. Either of these might be attacked with phagedæna or sloughing, although much more commonly the former; but these conditions are the results of external circumstances, and not of any inherent quality in the sore itself. He laid down, as a principle, that, on seeing a sore in the early stage, we might, in five cases out of six, positively state to the patient, at the outset, a distinct prognosis as to the occurrence of secondary symptoms or the contrary, without risk of error; and that, in consequence, we might select the appropriate treatment at once, and pursue it with confidence.

Mr. Thompson defined the external characters of the indurated or infecting chancre; contrasted them with those of the soft or non-infecting chancre; pointed out that the first was *invariably* attended with indurated, painless lymphatic glands in the groin, which attested the nature of the sore after the latter had disappeared; and stated that constitutional syphilis was certain to follow sooner or later, the induration of the sore itself being, in fact, the first sign of the systemic infection. Next, he described the character of the soft chancre, which was not necessarily, nor, indeed, most commonly, associated with any bubo at all, but if so, the bubo was inflammatory and would suppurate. In this case it was almost certain that secondary symptoms would follow.

He then considered the sores of a doubtful character—that is, those respecting which it was difficult at first to determine the nature, and showed how the two varieties might, nevertheless, in most cases be distinguished by attention to known causes of error.

The treatment of primary syphilis, in these two forms, then succeeded. The employment of caustic, which, if sufficiently powerful, and applied early, would prevent constitutional infection, was strongly recommended. The potassa cum calce, on the whole was regarded as the best. In the soft chancre, which was met with three or four times as often as the indurated chancre, there could be no occasion for mercury and iodine, as it was a purely local, not a constitutional disease. Local astringents or antiseptics, and if it was slow to heal, fifteen or twenty-grain doses of the potassio-tartrate of iron, twice or thrice a day, formed the best treatment. Such formed the bulk of the cases so frequently reported as examples of syphilis cured without mercury; in fact, whatever the treatment of these sores, no constitutional symptoms would manifest themselves. In the well-marked indurated chancre, small doses of the iodide of mercury, such as three quarters of a grain or a grain, guarded by about two grains of Dover's powder, appeared to suit more generally than any other form. The gums to be but very slightly touched, and the patient carefully preserved from salivation: this condition to be maintained for a considerable period. Where any intolerance of mercury by mouth was exhibited, inunction or fumigation should be substituted. Nothing, however, could be more obvious than the good effects of mercury in these truly infecting sores and early constitutional symptoms, provided its administration be kept within the limits recommended.

A tabular form, exhibiting the characters and tendencies of the two varieties of chancre by way of contrast, was presented, for the purpose of diagnosis, and showing the salient points of the subject at a glance. A copy of it follows here:—

Diagnostic Characters of the Two Varieties of Venereal Sores.

1. *The Soft or Non-infecting Chancre.*
2. *The Indurated or Infecting Chancre.*

THE SOFT CHANCRE.

Anatomical Characters.—Form: rounded, often irregularly so. Edges: sharp, well defined, as if cut with a punch; rather overhanging; not adhering closely to subjacent tissues. Surface: flat, but irregular, "worm-eaten;" often with yellowish or greyish matter adhering. No induration of tissues around, unless caused by caustic or other irritant; in which case the thickening is not defined in its limits, but shades off into the surrounding tissues, and has more or less the aspect of inflammatory action.

Pathological Tendencies.—The secretion is contagious, purulent, and plentiful; hence these chancres are rarely single; often, perhaps most commonly, multiple, one giving rise to another. It is usually slow to heal, has a tendency to spread, and is liable to take on phagedænic action. The soft chancre appears, from the records of practice, to occur with a frequency about four times as great as the indurated chancre.

Characteristic Gland Affection.—In many cases (but not in the majority) the inguinal glands are affected; in which case, one gland, usually, rapidly inflames and suppurates, and an open bubo is the result. The pus, at first, is inoculable, and capable of producing a soft chancre.

Prognosis.—The well-marked soft chancre is always a local affection, and *does not affect the system;* and no "specific" treatment (mercury and iodine) is required.

THE INDURATED CHANCRE.

Anatomical Characters.—Form: rounded.—Edges: sloping, not sharply cut; hard, sometimes a little elevated, closely united with subjacent tissues. Surface: hollowed or scooped out, but smooth as if varnished; often greyish at the centre. Induration well defined, incompressible, like a cup of cartilage let into, or set upon, the tissues beneath, and movable over them; no inflammatory areola; usually makes its first appearance between the fifth and tenth day, never after the twentieth; generally long survives ulceration. Induration varies in degree somewhat with the situation; but, when slight, is nevertheless always defined.

Pathological Tendencies.—The secretion is scanty, rather serous than purulent, and is not very readily inoculated; hence the sore is usually single, rarely multiple, and if so the sores appear simultaneously. It is indolent, but less so perhaps than the soft chancre; rarely takes on phagedæna. Either sore propagates by inoculation, invariably produces its like.

Characteristic Gland Affection.—It is *invariably* followed by slight swelling and marked induration of the inguinal glands on one or both sides (the sore being on the genital organs); usually several glands are affected; they are hard, incompressible and roll under the finger, are painless, and do not inflame or suppurate; except, in rare instances, from over exertion, in scrofulous subjects, &c., but then the pus is not specific and not innoculable. The induration of the gland coincides in time with that of the chancre itself. The primary sore having disappeared, or being denied, the gland-induration is an invaluable sign for purposes of diagnosis.

Prognosis.—Constitutional syphilis will certainly declare itself sooner or later. Mercury will retard, modify, or prevent the evolution of secondary symptoms.

A highly interesting discussion followed, in which several members took part. Many cases were related from the experience of the speakers, confirmatory of the truth of Mr. Thompson's statements.

Dr. **HEADLAM GREENHOW**, who had had charge of a military hospital, and had there seen much syphilis, did not recollect ever to have seen a sore accompanied by open buboes followed by secondary symptoms.

Mr. **BALLARD** spoke to the same effect.

Mr. **WEEDEN COOKE** was inclined to doubt the universality of Mr. Thompson's laws as laid down.

He considered that in women soft chancres are frequently followed by secondary affections. Again, he had seen a case of indurated chancre, in which no secondary symptoms followed, although no treatment had been adopted.

Dr. **Camps** objected to the author's views, that, if true, they would necessitate the admission of the existence of two different forms of syphilis, which he could not allow.

Mr. **Cleveland** cited an interesting case of indurated chancre, in which mercury was ineffectual in checking the phagedænic ulceration which followed.

Mr. **Robinson** had found the syrup of the iodide of iron a very valuable medicine for syphilis in children.

Dr. **Handfield Jones**, Mr. **Langmore**, and Dr. **Panton** also participated in the discussion.

Mr. **Thompson**, in reply, stated that he thought the day was not far distant when we should speak of chancre and chancroid to distinguish the two forms alluded to. He would only be disposed to allow the existence of one syphilis, although there were two kinds of venereal sores. In cases where soft chancres were said to be followed by secondary symptoms, he would dispute the correctness of the diagnosis. The sore had at one period been indurated. The diagnostic state afforded by the state of the glands he regarded as of great importance.

PATHOLOGICAL SOCIETY OF LONDON.

Dr. Watson President.

Dr. **Gibb** exhibited several preparations taken from a case of

NEURALGIA AND PARAPLEGIA, SUPPOSED TO BE DUE TO THE LONG-CONTINUED USE OF ARSENIC,

of which a trace was found in the liver and bones. The patient, a lady fifty-two years of age, had suffered for years from a cutaneous affection, for which she had almost constantly taken this mineral. Seven months ago, she had a violent attack of neuralgia of the shoulder, which subsequently extended to both groins, the thorax, and back. This was relieved for a time, but continued with the most agonizing severity. The abdomen became enormously tympanitic, muscular paraplegia slowly ensued, and a fatal result occurred. The post-mortem appearances showed general enlargement of the thoracic and abdominal glands, many of which had assumed the non-malignant form of melanosis. The termination of the ileum was bound down by a fibrous band. A trace of arsenic was found in the liver and bodies of the lumbar vertebræ, but nowhere else. The irritation produced by the use of arsenic for so many years, with but variable benefit, was believed to be the main cause of this distressing form of neuralgia.

Dr. **Gibb** also showed some

TEARS CONTAINING SUGAR FROM A CASE OF DIABETES.

These were shed by a young married lady, twenty-one years of age, the mother of one child, who has had diabetes for two years, since the child was weaned. They contained a large amount of sugar, as contrasted with that in an equal bulk of her urine, which was of the specific gravity of 1·043. An evaporated drop of the tears on a piece of glass gave a much thicker and more opaque crust than was yielded by a drop of the urine.

Mr. **Birkett** exhibited a

CYST FROM THE MAMMA, CONTAINING MILK,

which was much larger than a cocoa-nut, and contained two pints of fluid, which consisted principally of milk. This was taken from a lady aged twenty-seven, who has had it growing since she was nineteen years of age. There were numerous other small cysts developed in the glandular tissue. The specimen was an illustration of the chronic mammary tumour of Sir Astley Cooper, the mammary glandular tumour, the cystic tumour, adenocele, &c., all developed in the one gland.

Mr. **Birkett** also exhibited the "Two Aural Appendages," removed from the neck of a child, a notice of which appears in a former number of The Lancet of the present year.

Mr. **Christopher Heath** exhibited

AN EDENTULOUS LOWER JAW WITHOUT MENTAL FORAMINA.

The specimen was taken from a subject above ninety years of age, during the dissection of which no trace of the inferior dental nerve on the face could be found, and upon maceration, the mental foramina were found entirely obliterated. Mr. Heath considered the specimen of interest as bearing on a portion of necrosed lower jaw removed and exhibited by Mr. Bryant, in which both mental foramina were included, without any diminution of sensation in the chin. In the present instance, no nervous supply to the chin could be detected.

Mr. **Simon** exhibited a

NASAL POLYPUS, PROVING FATAL FROM PRESSURE ON THE BASE OF THE SKULL.

The man was a patient, fifty years old, in St. Thomas's Hospital, perfectly blanched from repeated hæmorrhages. He was blind of one eye, deaf, and had an idiotic look from the deformity of the face. He had a polypus presenting at the nostril for thirty years; and the recent hæmorrhages were arrested by acetate of lead. A few days before death he had a fit, followed by hemiplegia; and a second just before he died. The polypus originated in the sphenoid cells, extended into both nostrils, absorbed the sphenoid bone, and was in contact with the dura mater. The internal carotid artery was obliterated. Three considerable abcesses were found in the substance of the brain.

Mr. Simon also showed

DRAWINGS OF A PECULIAR FORM OF INFLAMMATION OF THE BUTTOCKS AND SCROTUM,

in a man aged twenty-nine, who had been ill for ten months. Nine years ago he had syphilis, and the present disease was attributed to that malady.

Mr. Mitchel Henry exhibited a preparation of a

RUPTURED URETHRA,

from a man aged sixty-three, who was admitted into the Middlesex Hospital ten days before with retention of urine. The bladder was distended, and on introducing a catheter, it entered a stricture, passed through a false passage and then into a cavity, but not the bladder. The viscus, however, emptied itself in this way. This continued for three days, when he died from ischuria renalis. Besides general disease of the urethra, with abscesses, &c., that canal was found to be deficient to the extent of two inches.

Mr. Bryant exhibited three specimens of

DISEASED HIP-JOINT.

Two of these were taken from a man, aged forty-nine, who died in Guy's Hospital, under the care of Dr. Wilks. One specimen was of not more than ten weeks' duration; the other of many years. The recent specimen is but partial, and is confined to a spot on the head of the femur, near to the insertion of the ligamentum teres, and the corresponding part of the acetabulum. The disease is granular degeneration of the cartilage, the general and microscopical characters affording a good illustration of the process of disease, as described by the author in The Lancet for October, 1857. In one spot the degeneration was complete, as shown by excavation, exposing the bone; in other parts the disease had not progressed so far, and had commenced upon the bony surface, as seen by the cartilage being loosened from the bone, and easily peeling off. The cartilage cells in the diseased portions are enlarged to different degrees, and filled with granules; but the disease is confined to the spots indicated, the cartilage in other parts being quite healthy. In the corresponding portion of the acetabulum, where the cartilage was involved, the disease had commenced upon the outer surface, and had not involved the deeper parts or exposed the bone. The bone itself seemed denser than usual, and in the fresh state plainly demonstrated an excess of vascular action where the cartilage was diseased, leaving the author fairly to infer that the degeneration of the cartilage was secondary in the order of the events, the affection of the bone being the primary disease.

Specimen 2 was taken from the same subject, and was of about twenty years' duration. The limb had been an useful one, and since its early disease had never caused any pain. There was no history or external signs of abscess of the joint. The joint was perfectly fixed and anchylosed by ligamentous union; much new bone had been thrown out upon the lower lip of the acetabulum, and the neck of the femur had been almost all absorbed. The head of the bone had formed a curious hook-like process and the cartilage had entirely disappeared. The disease here must surely have commenced in the bone itself. A chronic inflammatory change of a low type (rightly, perhaps, called strumous) was probably the earliest condition, followed as a consequence by absorption of the cartilage and of the neck of the bone. The disease could not have commenced in the synovial membrane or cartilage, as other symptoms, such as abscess, &c., would have ensued, and in this instance also, like the previous, the bone seemed to have been its original seat.

Specimen 3 was taken from a boy, aged six, who died in Guy's Hospital, under the care of Mr. Cock, from tubercular meningitis. The duration of the disease of the hip could not be well made out, but about two years was the probable period. It will be seen that the disease in this case depends upon the bone, a portion of dead bone being visible in the under side of the neck. The cartilage had disappeared altogether, and the synovial membrane was thickened from old inflammation; abscesses had existed for some months, and until the source of all mischief, the sequestrum, had come away or been removed, a recovery could not have taken place. As far as the local disease goes, it is certainly favourable to that severe operation, excision of the hip. The acetabulum was deprived of its cartilaginous covering, but otherwise did not appear diseased, the disease apparently being confined to the point, as represented in the specimen.

Mr. Bryant also exhibited a specimen of

MEDULLARY CYSTIC DISEASE OF THE TESTIS.

This specimen was taken from a man, aged twenty-six, who was admitted into Guy's Hospital on April 17th, under the care of Mr. Cock. He had a pale and cachectic appearance, and had experienced but indifferent health. From boyhood, after retaining his urine for some time, his right testicle retracted and disappeared from the scrotum, causing at times great pain. Six years ago he had gonorrhœa; and one year ago a chancre upon his penis, but unattended with any secondary symptoms. About one year since, without any blow, or known cause, his right testis began to enlarge, unattended with any pain; since that time it has gradually increased; and upon admission it was about four inches in its longest diameter, it was quite painless, and could be manipulated without inconvenience, and squeezed without causing its peculiar sensation. It was of an oval shape, slightly flattened, and in points gave a fluctuating sensation. It was explored with a needle, and only a little bloody serum came away. The inguinal glands were slightly enlarged, and with the exception of having lost flesh for the last three years, he was comparatively well, although for the last year he had experienced flying pains down the right leg, at times very severe. On April 20th it was excised; and upon examination the disease was evidently connected with the body of the testis, which was smooth, firm, and in parts distinctly fluctuating. The epididymis was much wasted, and beneath its serous covering were developed cysts of different sizes, and from the caput major two may be seen attached to the body by long peduncles, one being nearly an inch long. The few that were opened contained clear serum, and no spermatozoa. Upon making a section of the tumour, all signs of the body of the testis had disappeared, the disease having apparently been developed in it. It was composed entirely of cysts of different sizes (varying from that of a walnut to a millet-seed), some containing others of a smaller growth, and these again containing a third series. Some were filled with a clear serum, and others with a bloody or tenacious fluid, and some were filled with a soft pulpy growth, composed entirely of nuclei and nucleated cells, and indeed presented all the appearances of the medullary cancer. From the above examination, there can be no doubt that the specimen is a mixed one of the cystic disease and the medullary cancer. It seems to have been developed in the body of the testis, as well as in the rête testis, the reputed general seat of the cystic disease; and the simple cysts developed in the epididymis, and upon it, are apparently examples of the more simple forms of cysts as found upon the testis. Upon the whole it would appear that the true cystic degeneration was the chief disease, and that the medullary disease was grafted upon it. The specimen is a good one, illustrating the development of simple cysts, which at times form the encysted hydroceles, the true cystic diseases of the testis and the medullary.

Dr. F. **Anstie** showed a remarkable example of

EXTRA-UTERINE FŒTATION,

taken from a female aged thirty-nine. She menstruated in 1842; in 1843 was delivered of a living child; in 1845 was again pregnant, and went her full time, and had a remarkable fullness at the left side of the abdomen. At the ninth month she was seized with labour pains, which were supposed to be spurious. At the end of three weeks she menstruated again, and to the end of her life the tumour remained in her left side. It was recognised by Dr. Bird and Dr. Lever as a case of extra-uterine fœtation. Subsequently she was delivered of a full-grown child, notwithstanding the presence of this tumour. Her health was perfect till March last, when she died from an attack of peritonitis. The right ovary was found natural, but the left was absent, and no doubt occupied by this fœtus; but Dr. Anstie could not say whether it was really tubular or ovarian.

Dr. C. J. B. **Williams** asked if any of the fœtal tissues had undergone fatty degeneration, as it had lain so long in the abdomen?

Dr. **Anstie**.—None.

Dr. **Hare** exhibited an

ANEURISMAL DILATATION OF THE AORTA,

from a man aged forty-five, who had been a soldier twenty-three years, and was of steady habits. He had never had rheumatism, but was affected with pneumonia when first seen by Dr. Hare, and he had in addition a loud double murmur at the apex and another at the base of the heart. The pneumonia disappeared, but the dyspnœa increased, and he suffered much from angina. These still further argmented, anasarca set in, and he died two months after. At the post-mortem examination, the heart was found to be enlarged and hypertrophied, and an aneurismal dilatation of the aorta was present, with disease of the aortic valves and atheromatous deposits.

Dr. **Bristowe** exhibited specimens to illustrate the

MODE OF PRODUCTION OF HEPATIC ABSCESS.

This was a continuation of the subject brought forward at the previous meeting. The first specimen was from a man suffering from chronic ulcer of the stomach, with suppurative inflammation of the walls of that organ, and of the small intestines, immediately before death. The liver was apparently healthy, but the larger tubes of the portal vein were filled with coagula, with distinct cavities containing pus. Another example was from a case of hydatid abscess of the liver; a third, from one of suppurative inflammation of the substance of that organ. The hepatic vein was invaded in both of these. In a fourth, the liver appeared full of abscesses; and the patient spat up, during life, pus, which came from the liver. The common duct was completely blocked up by a calculus, and the other duct was dilated into a pouch. A fifth case was one of hydatid abscess also, accompanied by a number of other small abscesses. None of the veins were punctured by them, but some of the hepatic ducts were.

Dr. **Septimus Gibbon** had presented a somewhat similar example of abscess in the kidney, in which ulceration into the small intestines ensued.

The **President** remarked upon the interest of Dr. Bristowe's communication, but observed that what he should like to have proved was, how abscess of the liver can produce dysentery. Nothing yet, he said, had been brought forward to show how that can take place; but we could clearly see how dysentery might so affect the blood as to produce abscess of the liver.

Dr. **Hare** referred to a case of his, brought before the Society some years ago, of chronic dysentery, producing acute abscess of the liver. This is the common theory, and he believed the correct one.

Dr. **Baly** observed that dysentery may sometimes be latent. He had recently seen a case of abscess of the liver in which dysentery was afterwards found to have been present.

Mr. **Sibley** exhibited a

TUBERCULOUS SPLEEN,

taken from a child four years of age, suffering from purpura, in the Middlesex Hospital. It was ill only a week before admission, and had numerous spots of purpura about the body. On admission, it vomited blood, &c., and gradually sank in ten days, in spite of treatment and diet. Tubercular disease existed in every part of the body; in the pleuræ, with petechial spots beneath the membrane. No effusion of the blood was found anywhere. Crude tubercles were present in the lungs, the bronchial and abdominal glands, on the surface and in the substance of the liver, and in the kidneys. But the organ most affected was the spleen, which was filled with tubercles.

Dr. **Ogier Ward** showed the

TONSILS AND OTHER PARTS FROM A CASE OF DIPHTHERITE.

He had recently seen six cases of diphthérite in the same house, two of the patients being sisters. All these cases were related in detail. The treatment consisted principally of chlorate of potass and liquor of the acetate of ammonia, with nitrate of silver to the throat. All the patients recovered, with the exception of the two sisters who died. One had enlargement and congestion of the thyroid and sub-maxiliary glands. Gangrene attacked the tonsils and neighbouring parts. The body of the second sister was not examined.

Dr. **Baly** had seen four cases in one family last summer, and he found many features quite unlike scarlatina.

Mr. **Mitchell Henry** exhibited a

LARGE CALCULUS FROM A BOY OF FOURTEEN YEARS,

which he had removed a few days previously. He was two years ill with the symptoms of stone, but had been much better latterly. The calculus weighed three ounces and three-quarters, and was found to be adherent to the upper part of the bladder by means of a distinct pedicle or stalk. The surface of the stone was covered with an organised substance which caused the adhesion. The comparative mildness of the symptoms, latterly, was explained by the position of the stone. The nucleus consisted of pure lithic acid. No doubt ulceration had taken place on the mucous membrane; and, lymph being poured out, adhesion to the stone resulted.

Mr. **William Adams** showed several specimens illustrating the

REPARATIVE PROCESSES IN HUMAN TENDONS AFTER SUBCUTANEOUS DIVISION FOR DEFORMITIES.

Such specimens, he observed, were very difficult to obtain from the human subject, which would account for the want of any connected account of them. During the seven or eight years of his connexion with the Orthopœdic Hospital he had collected about ten specimens. The specimens shown were obtained at periods of from a few months to three years after the various operations. The new tendons were from three-quarters of an inch to two inches and a quarter long, and were more easily distinguishable by the eye than with the microscope.

Mr. **Birkett** exhibited an

OSTEOID TUMOUR,

which was very hard in the centre and cartilaginous at the circumference, extending along the linea aspera of the femur, and lying amongst the muscles of the thigh. It was removed from a healthy woman in the middle period of life.

Mr. **Birkett** also showed several

DISEASED BREASTS.

One specimen contained cysts in great number, which were developed in the breast of an unhealthy female, and had been growing for several years. One cyst had ulcerated. The removal was followed by recovery. A second was a breast removed on the day of its exhibition, and was one of central infiltration of the gland, with peripheral cysts in the remaining portion of it. These were filled with sanguineous fluid. Other specimens illustrated cancer occurring at various ages in women, and at various periods of growth.

Mr. **Henry Thompson** exhibted a

LARGE HYDATID IN THE LIVER,

taken from a lad, aged twelve, who was sent, in March, 1858, to the itch ward of the St. Marylebone Infirmary. He was observed to be the subject of a large tumour in the right hypochondriac and epigastric regions, and extending beyond.

On March 19th, he had a severe fit of epilepsy, the first. From that day till April 30th, when he died, the fits recurred very frequently and with great severity. For several days before death he was insensible.

At the post-mortem examination, the liver was seen to be divided into two portions by a large fibrous cyst in its substance. Within this was an acephalocyst, almost filling the fibrous cyst, and from it twenty-two ounces of albuminous fluid was evacuated. There was one other only, containing about two ounces. In the fluid contents were numerous echinococci and hooklets, visible under the microscope.

Mr. **Henry Thompson** also exhibited a specimen of

VILLOUS GROWTH FROM THE VOCAL CHORDS, CAUSING DEATH BY ASPHYXIA.

A girl, aged eight years, had been subject to occasional attacks of impeded respiration, threatening suffocation, for two years past. She had been under Dr. Randall's care in the Marylebone Infirmary, and had been considerably benefited by external counter-irritation to the throat, to which, as its seat, her distress was referred. She had a violent attack in March last, from which she speedily recovered. It was repeated on May 2nd, at ten o'clock, P.M., and before aid could be procured she was dead. At the post-mortem examination, the larynx being laid open from behind, a warty growth was found occupying the situation of the superior and inferior vocal chord of each side and the intervening ventricle, a very narrow, almost imperceptible interval existing between the opposing growths before the larynx was opened. On examining the structure, it was seen to be a specimen of the ordinary villous growth, consisting of numerous very minute villi, thickly coated with pavement epithelium, similar to villous growths in other parts of the body, a specimen of one of which, in the bladder, Mr. Thompson recently exhibited.

NORTH LONDON MEDICAL SOCIETY.

MR. ERICHSEN, PRESIDENT.

PECULIARITIES OF THE INTERIOR OF THE ANTRUM; CASE IN WHICH THE FANG OF A TOOTH WAS IMPACTED IN A POCKET OF THE ANTRUM.

MR. CATTLIN (in accordance with the suggestion of the President, that oral communications should be substituted for written papers) described and demonstrated from a variety of preparations, wax models, and drawings, some interesting peculiarities of the antrum, and called the attention of the Society to their importance in a surgical point of view. He stated that the interior of the antrum had not yet been described with sufficient minuteness for practical purposes; that Highmore entertained an erroneous idea of its shape, and that although Holden, in his beautifully-illustrated work, had given the best description he had met with, still even that author had failed to point out many important varieties of form and size. The most common shape of this sinus was certainly somewhat pyramidal, but it would be difficult to collect many specimens precisely alike. As a general rule it was larger in the male than the female, and from a limited investigation, he believed the cavity sometimes diminished in old age. Its shape and size were extremely variable, and it very often differed in these respects as well as in the elevation of the floor on the two sides of the same subject. Pockets and fossæ, formed by thin plates and thick edges of bone, were frequently met with in all parts of the antrum, but particularly in the anterior and posterior parts of the floor, and their depth was often increased by depressions in the walls. The canine, bicuspid, and molar teeth would be found to perforate the inferior wall more frequently than was generally supposed. The important bearing which these facts had upon operations on the superior maxilla, and the errors of diagnosis which they were calculated to cause, were supported by the following remarks:—If the trephine or trocar should impinge upon such a plate or ridge of bone as would be found in some of the preparations upon the table (which were most frequently seen above and between the first and second molars), the surgeon might readily be led to think that the instrument had not reached the antrum, or that a bony tumour was present in its interior. If under such an impression the parts should be examined, a probe would strike against the bony septum, and if the operator was not aware of these peculiarities which had been described, a serious error in the diagnosis of the case would most probably be made. An unique specimen of osseus cyst within the sinus, containing a loose tooth, was exhibited, to show that the most skilful surgeon might mistake one of the plates of bone for a similar growth, and the Society was indebted to the liberality of Mr. S. Cartwright for the opportunity of examining such a beautiful preparation. The deep pockets and fossæ which had been demonstrated, showed the necessity for washing out the fœtid and acrid discharges (which in cases of disease would collect in those parts), prior to the use of injections, and, also, the importance of using a tube perforated in many parts, so as to throw the fluid forcibly in all directions. The difficulty of extracting foreign bodies from the antrum when impacted in a deep pocket or fossa was illustrated by the following case, which occurred only a short time since, and had been published in the *British Journal of Dental Science.* The fang of a tooth had, during an attempt to extract it, passed completely into the antrum. The patient being a gentleman whose father had died of secondary malignant disease of the jaw, a consultation was held with an eminent hospital surgeon, and it was thought advisable under the circumstances to trephine the antrum; but although two large openings were made, and the cavity was frequently explored, and injected at the expiration of an hour's search, three surgeons had failed to remove the fang. On the second day a large quantity of water was forcibly injected from a powerful enema syringe, but with no better success; on the third day Mr. Cattlin constructed a small gutta-percha scoop, which was attached to the end of a gold probe bent at such angles as to sweep the floor of any pocket in which the foreign body might have lodged. With the aid of this simple instrument (which was exhibited) the fang was readily removed in the course of a few seconds. It was somewhat surprising that so little pain followed from the operation and the irritation of the lining membrane. After two or three days the patient pursued his ordinary business, and at the end of three months the parts looked perfectly healthy, and had apparently filled up with bone. A small quantity of healthy mucus could, however, be forced through a very minute opening in the gum about four months after the operation; but very little inconvenience of any kind was suffered after the first two days. Mr. Cattlin apologized for the small amount of original information which he had been able to bring before the fellows, and thought it right to state that most of the facts related were embodied in a paper which had been read before the Odontological Society of London.

The PRESIDENT inquired whether Mr. Cattlin had met with many cases where the walls of the antrum were so thin as to crackle when pressed, in the manner which had been described by some authors?

Mr. CATTLIN replied that he had seen both the anterior and inferior walls much dilated, but not sufficiently so to cause the sensation alluded to. He thought that the feeling mentioned was often attributed to disease of the antrum, when in fact it really arose from a membranous cyst which generally commenced in the alveolus, and dilated the bone *in the neighbourhood* of the antrum. Such a condition of parts was not uncommon.

Mr. **Part** suggested whether the difference in the two sides of the face, which was so often seen, might not arise from the difference in the size and elevation of the antrum which had just been demonstrated?

Mr. **Cattlin** thought that variations in the malar bone contributed somewhat to the appearances alluded to, but had no doubt that the size and shape of the antrum materially affected them. He recommended that the sides should always be carefully compared within the mouth prior to perforating the interior wall of the antrum.

WESTERN MEDICAL AND SURGICAL SOCIETY.

Dr. Fuller, V.P., in the Chair.

Dr. **Scott Alison** read a paper on

THE DIAGNOSIS OF PULMONARY CONSUMPTION AT ITS COMMENCEMENT.

The importance of diagnosis at an early period was shown by reference to facts arranged under three heads—1st, the vast mortality in advanced stages; 2nd, the great destruction of the lining structure almost invariably found when the disease has long existed, in a great proportion of cases excluding all reasonable hope of remedy; and 3rd, the material benefit afforded in a very large proportion of cases easily diagnosticated and treated. The number of patients under the care of the author at the Hospital for Consumption at Brompton, who here formed the grounds for calculation, is nearly 2000. The mortality in advanced cases has been very great, and very few have presented signs of permanent restoration to health; whilst the mortality in early cases has been comparatively trifling, even when long observed. About one-half of these latter cases have been greatly improved, and have presented satisfactory evidences of the disease being arrested. Numbers have returned to their employment, or applied themselves to less laborious and exposed occupations. Muscle and fat have greatly increased, cough has been removed, and the respiration has been deprived of much of its shortness. About three-fourths of these patients presented grave symptoms and the usual physical signs; while the remainder presented either well-marked physical signs without material symptoms, or very marked symptoms with physical signs rather beneath the average weight of evidence ordinarily deemed proof of phthisis. The author regards the results as due to the early period at which disease was diagnosticated, and not to any particular method of medical treatment. Early diagnosis would be secured by a complete inquiry into the history of each case, by regarding the entire series of symptoms, and by a complete physical examination instituted at once, the chest being freely exposed back and front. The present state of medical knowledge was such and so widely diffused, that it was not likely we should be able to find any new symptoms of the disease, one which had been carefully observed for ages; but it was not unlikely that we should increase our knowledge of the physical signs. In the particulars of sound, form, and motion, additions would probably be made; but it was with respect to sound that most advance would be effected. Simple observation by the present means of auscultation would probably suffice to do much, but it was not unlikely that improvements in our instruments for auscultation would render assistance. Dr. Alison referred to certain sounds which he had frequently heard in phthisis at its commencement, and before dulness of percussion had manifested itself, or was materially pronounced. These sounds were an "arrow-root-powder" sound, very fine, and accompanying expiration; buzzing, humming, and kettle-boiling or kettle-singing sounds. He was as yet uncertain as to the mechanism of the kettle-singing sound, but was inclined to think the evidence pointed to slight pressure on the veins of the lung causing oscillations of the blood and vessels, such conditions as are produced in the neck by gentle pressure with a stethoscope or by tightened integument. This sound is continuous, and several of the patients who presented it had suffered from hæmoptysis. Crumpling sounds had been frequently heard. A great means of discovering phthisis was afforded in the differences in the character and amount of respiration; and he (Dr. Alison) believed that the instrument which he had made, which gave a stethoscope for each ear, and which he designated the Differential Stethoscope, would prove available in rendering very slight differences in respiration appreciable, which could scarcely be discovered by the ordinary stethoscope. The ordinary stethoscope necessitated removal of the instrument from one part to another, and a certain loss of time, though slight in itself, important when comparing two sensations nearly alike, was incurred. For the diagnosis of pulmonary consumption at its commencement, we should look for the signs of that disease at that period, and not for those of later periods. The acoustic properties of the lung with small points or spots of tubercle were, and must be, different from those of that lung which is so studded with tubercles, or so infiltrated with that material, that nearly all the lung tissue proper is pressed upon or obliterated, or when the lung is broken down and has little cohesion, and presents numerous cavities. (The Differential Stethoscope was exhibited to the Society.) In many examples of pulmonary consumption no dulness on percussion whatever is found; and not one of the recognised signs is present in all cases, or even at all times in the same case.

We must be content with a certain amount of evidence, and that will not be the same in all cases, or in the same case at different times. Deviations from the natural configuration of the chest occurred in pulmonary consumption at an early period. These were made out by their history and by comparing one side with another. The author's Chest-Goniometer, would serve in discovering the deviations from the natural angles and curves, and in measuring them. The measurement at one period might be compared with the measurement at another. (The instrument was exhibited.)

Specimens of tuberculated lung, both in the early and later stages of the disease, were exhibited; and they served to prove that the physical signs in the different conditions of lung must greatly vary, and that the lung dotted with solitary tubercles the size of mustard-seeds would afford few if any of the ordinary signs, and chiefly produce deviations in quality from the natural respiratory sounds, and some such delicate new sounds as had been referred to. The author was not prepared to say that these delicate sounds would not be found in other morbid states besides phthisis, but the same limitation held in respect of all other sounds.

The examination of the sputum, and the discovery by means of the microscope of tubercle and lung tissue, were referred to.

Mr. **Leggatt** read the report of a case of

SPONTANEOUS RUPTURE OF THE FEMORAL ARTERY.

The patient, a man aged seventy-three, had been subject to gout for the last forty years, and had passed albumen in his urine for a long period, though of late it had ceased entirely. In the last four or five years before his death he had had giddiness, and had been attacked with symptoms of angina pectoris with syncope; he had also complained of numbness of the lower extremities, with pains, and had become less active. On the 13th of March, 1858, he had an attack of syncope, and pain at the top of the right thigh, which was unattended with swelling or tenderness. The urine was loaded with albumen, and he fainted twice in going to bed. On the 14th, swelling and œdema supervened to the pain in the thigh, the swelling assuming a brawny appearance towards night. On the 15th, ecchymosis occurred over the upper part of the rectus muscle, and pulsation was perceptible in the swelling. On the 17th the ecchymosis spread, and no pulsation could be detected in the popliteal or posterior tibial arteries. He became delirious, and died. Upon the examination after death, the ecchymosis was found to extend from Poupart's ligament above to the ankles below. All the tissues were infiltrated with blood, and masses of clotted blood were found between the muscles extending into the abdomen; the gracilis and other muscles were ruptured and infiltrated with blood. Just at the point where the femoral artery passes through the tendon of the adductor muscles a hole was detected in the artery, and around the opening pieces of the fibrous structure of its coat were seen. The coats of the artery were extensively diseased, being atheromatous up to the giving off of the profunda and above. The opening was considered as the result of ulceration, and under the microscope ossific plates and atheromatous deposits were seen imbedded in the walls of the vessel.

Mr. **Martyn** then detailed the particulars of a case of

CROUP.

The child, aged three years and a half, first gave symptoms of croup on March 17th; they were, however, unrecognised as such until March 22nd, when Mr. Martyn first saw her. They were very decided then, and called for active treatment by calomel, antimony, &c. The next day, the child was relieved, but the medicines ordered to be continued. On the 27th, the croupy symptoms, which had mended up to that time, recurred; and, on the 28th, by the advice of Dr. Hastings, leeches were applied to the larynx. The leech bites, however, bled too freely, and the child became blanched and exhausted, and the next day required the use of opiates, and the free administration of stimulants. The child, however, never rallied, but died on the 5th of the next month, being twenty-one days from the commencement of the attack. There was no post-mortem examination. The case was interesting on account of the length of the duration of the symptoms before death, the croup in this case probably killing by the disease extending down the trachea into the larger bronchial tubes, and so obstructing the breathing.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

> Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—Morgagni. *De Sed. et Caus. Morb.* lib. 14. Proœmium.

GUY'S HOSPITAL.

Popliteal Aneurism; Treatment by Pressure Unsuccessful; Deligation of the Femoral Artery; Cure.

(Under the care of Mr. **Birkett**.)

The rule is now almost an invariable one, in our large hospitals, to give a fair trial to the use of compression in aneurism, as recommended by the Dublin surgeons, and if it does not prove successful in producing consolidation of the sac, then is the main trunk above it submitted to the operation of deligation. The interesting case which we now record was being thus treated, when the integuments to the outer and lower side of the sac were becoming discoloured, and sloughing was feared. The femoral artery was therefore tied, with very satisfactory results, and the ligature came away on the ninth day.

John M——, aged thirty-six, a tall, muscular, hard-working Irish labourer, was admitted Dec. 2nd, 1857, on account of a large swelling in the right popliteal region. He had uniformly enjoyed good health, had lived freely, but not intemperately, and his constitutional nutrition was good. He had followed his usual daily labour nearly to the day of application for admission, although three weeks before this his attention was directed to the back of his right knee, in consequence of feeling pain there, and then he discovered the swelling, which has slowly enlarged since that time. About three weeks before the discovery of the popliteal swelling, he injured his foot by the fall of a piece of iron on it, but he did not complain of the injury extending to the ham.

When admitted, there was a very large swelling in the right popliteal space, entirely filling it in the centre, and forming a bulging projection on either side, which was, however, most prominent on the outside. The impulse of pulsation was very well marked, and that peculiar and gentle filling and dilatation of the swelling synchronously with each contraction of the left cardiac ventricle was remarkably well felt. Pressure on the femoral artery in the upper third entirely arrested all pulsating movement in the swelling, and the aneurismal sac became nearly empty, and very little hardness remained. He was directed to keep in bed, to apply diacetate of lead lotion, to take castor oil occasionally, and to have full diet.

Dec. 8th.—The application of pressure was commenced with a weight applied over the femoral artery in the superior third of the thigh.

15th.—During the last week, and especially the latter part, he had been extremely irritable, passing restless nights, unless he took an opiate, and complained of the pain caused by the pressure. The leg became œdematous, the popliteal region much more painful, without any apparent improvement in the condition of the aneurism, the sac being quite as large and no fibrine collecting. The screw compressor was next used in conjunction with the weight, and the leg elevated slightly above the plane of the trunk.

22nd.—At the expiration of the second week, the pulsation in the aneurism was not quite so strong; the œdema of the leg had disappeared; he was less irritable, but still it was very difficult to maintain the necessary diminished circulation for any length of time. The persuasive powers of the dresser, Mr. Bowes, were insufficient to induce the man to remain quiet, or to submit to the desired amount of restraint.

24th.—When Mr. Birkett visited the patient to-day, he found that the tumefaction was increased, the pain more severe, and upon the outside of the leg, near to the head of the fibula, there was a dull red mark in the integuments, something resembling a bruise. The centre of this spot was soft and slightly œdematous. Fearing from these indications that sloughing of the sac might take place, he recommended deligation of the femoral artery at the usual place. The man was placed under the influence of chloroform, and the artery tied in the ordinary way. The incision was made about one inch lower down in the thigh, on account of the position of a large vein, which directly crossed the site commonly selected for the incision. The artery seemed to be quite healthy.

25th.—Had passed a good night. The pain in the popliteal space diminished, and the swelling and discoloration less. A slight impulse may be detected in the aneurism by careful manipulation.

26th.—From this date the patient progressed most satisfactorily, but being rather weak and restless, he was ordered a mixture containing morphia, ether, ammonia, and camphor, at night.

28th.—Ordered stimulant, six ounces of rum daily; sleeps comfortably; no pain in the leg. The temperature of the limb had been maintained at its normal standard.

29th.—Wound looks very healthy, and the pus flows from the lower end in small quantity. To have decoction and tincture of cinchona, with dilute nitro-muriatic acid three times a day.

Jan. 2nd, 1858.—The ligature came away. It was the ninth day since the operation. Progressing favourably; has been allowed nutritious diet all along.

9th.—The aneurism, although much smaller, still contained fluid blood, and it did not appear that fibrine had formed in it. Ordered solution of the perchlorate of iron and infusion of quassia three times a day.

19th.—The wound was nearly healed; the granulations were rather elevated, and nitrate of silver was applied. The popliteal tumour had become consolidated, but still contained much fluid; the discoloration on the outside had not disappeared.

25th.—The patient got up, and a few days after he walked about the ward.

The aneurism had been observed only three weeks before admission, contained scarcely any fibrine but fluid blood, and was not at all influenced by the compression of the vessel, after using these means sixteen days. Circumstances then arose which led to the supposition that the outer wall of the sac was inflamed and probably bursting, and therefore deligation of the femoral artery was performed. This operation was not followed by any untoward result, and the slow obliteration of the sac was still a remarkable feature in this case.

There was still (three months after the operation) a considerable swelling in the popliteal space, but the pulsation is entirely arrested, and the disease cured.

ST. MARY'S HOSPITAL.

Wound of Cornea, Sclerotic, and Iris, from an iron screw weighing twelve grains, which was subsequently extracted.

(Under the care of Mr. White Cooper.)

The ophthalmic wards of St. Mary's Hospital have lately presented the following cases of considerable interest:—

A deaf and dumb lad, aged eighteen, was admitted on the 13th of April, 1858. Three weeks previously, whilst working a screw cutting-machine in a manufactory at Derby, a fragment of iron struck his eye with great force, and, inflicting a large wound, instantly blinded it. The same evening he was seen by Mr. Baker, of Derby, who took charge of the case, and treated it with much skill for three weeks, at the expiration of which time he was sent to St. Mary's Hospital. On his arrival, the eyeball was found considerably diminished in size, and presenting a large wound, involving the cornea and sclerotic. The iris was implicated in the wound, and there was no trace of pupil. The lad was in a wretched state of debility, mainly from poverty, and the treatment adopted was simple cold dressings with belladonna to the eye, good diet, and steel with quinine internally. Under this treatment, the eye progressed favourably, the pain and inflammation subsided, and cicatrization proceeded satisfactorily.

On Saturday, May 8th, Mr. White Cooper observed that a dark-brown point had made its appearance in the wound, and expressed his opinion that it was metallic, which a touch with a probe proved to be the case. He tried to remove it with forceps, but finding that it was firmly impacted in the eye, he ordered the patient to the operating-theatre, and proceeded to extract it under chloroform. Having made an incision through the cornea and iris in their whole breadth, he seized the foreign body, and with some difficulty withdrew it. It proved to be a piece of iron screw, four lines in length by three in breadth, and weighing twelve grains. Its edges were extremely jagged and sharp, and the surface irregular. Notwithstanding the violence inflicted on the eye by the withdrawal of this mass, scarcely any irritation followed, and on the following Tuesday the lad was able to leave his bed, and walk about the ward.

It is evident that at the time of the accident the fragment of iron cut through the cornea and iris, and buried itself out of sight. It is most remarkable that such a mass, of a form so calculated to excite irritation, should have caused so little, that even pain, the most common and most annoying of all symptoms attending the presence of foreign bodies in the eyeball should have subsided and the wound cicatrized; that it would subsequently have made its presence known there is no doubt, and sympathetic inflammation and destruction of the other eye would have been the probable consequence.

Blow on the Eye from a Nail; intense inflammation, with sloughing and complete collapse of the eyeball.

(Under the care of Mr. WHITE COOPER.)

In contrast to the foregoing stands the following case:—

An Irishman, aged thirty-seven, was admitted into St. Mary's Hospital, March 22nd, under Mr. Coulson. Two days previously, while shaking carpets, he was struck on the left eye by a nail thrown up from the carpet. It is doubtful whether the eye was penetrated or not; but the same evening it became painful, swelled rapidly, and on the 22nd, when he was admitted, the whole globe was enlarged and acutely inflamed. Eight leeches were immediately applied, and five grains of calomel administered, and saline mixture ordered thrice daily.

March 23rd.—Eye worse; lids purple and enormously swollen, and the eyeball projecting from between them. To have four grains of calomel immediately, to be followed by senna mixture; six leeches to be applied to the temple.

On the 24th, this patient was transferred to Mr. White Cooper. The lids at this time were livid and greatly tumefied; between them, and firmly grasped by them, a dark-brown mass projected, from which a little thin pus oozed. With some difficulty the limits of the cornea were discerned in the centre of this mass, which was, in fact, the anterior hemisphere of the eye in a state of slough; the skin was cold and clammy: pulse 60 and low. He complained of intense pain in the eye and head. Poultices, with frequent fomentations, were ordered for the eye; forty drops of laudanum in camphor mixture immediately, to be followed by twelve drops every four hours: strong beef-tea every two hours.

25th.—The eye discharging pus freely from an aperture in the cornea; appearance much the same. Ordered two grains of quinine thrice daily.

30th.—The slough, including the whole cornea, and a considerable portion of the sclerotic, separating kindly; all pain has ceased. To have wine and a mutton-chop; the quinine to be continued.

The result of this case was complete disappearance of the eye; the appearance is much the same as if extripation had been performed, and frænæ have, to a certain extent, bound down the lids.

When we contrast the formidable train of symptoms which followed the slight injury in this case with the moderate inflammation set up by the fragment of iron buried in the eye in the other, we can only attribute the difference to the more favourable habit of body—the semi-starved condition of the poor lad; whilst the man's blood was inflamed by ardent spirits and gross condition of body.

A striking instance of rapid recovery after extirpation of the eye has recently presented itself at this hospital. On Wednesday, March 31st, Mr. White Cooper excised a very large staphylomatous eye from a lad, aged eighteen. On the following Saturday, three days only after the operation, the orbit was quite in a condition to bear an artificial eye, and the patient was walking about the ward quite rejoicing in the relief afforded to the pain which the diseased eye had long caused.

Necrosis of the Tibia; removal of two Sequestra; Recovery.

(Under the care of Mr. Coulson.)

Some of the cases which we have placed upon record in our "Mirror" illustrate the skill of the surgeon in relieving disease, while others bear testimony to the wonderful powers put forth by Nature for the cure of severe maladies. In the present case (and the remark will apply to most successful operations for necrosis), we have an example of the happy results which may ensue when Nature seconds well-directed art. These cases exhibit surgery in a very favourable light; for no one can pretend to say that they would terminate well without operative interference. A large portion of a long bone is struck with death; Nature, unable to remove the dead bone, endeavours to supply its place; but, in this effort, imprisons the useless sequestrum. As no dead portion of the body can remain enclosed by living tissues without giving rise to more or less irritation and inflammation, the sequestrum becomes a source of constant mischief. The surgeon now steps in, removes the offending body, and permits Nature to complete her cure undisturbed. The extent of bone sometimes removed and replaced in cases of necrosis of the tibia is surprising; but it is also a matter of surprise when we consider on what slight causes this extensive destruction of the osseous system may depend. In some cases, nearly the whole of the tibia is struck by death, yet the patient is apparently of sound constitution, and he is unable to trace the mischief to any injury or other cause.

We are unacquainted with the circumstances under which this extensive death of the bone takes place, but, whatever they may be, they do not always prevent Nature from at once setting up the reparative process in an equally extensive manner. This would seem to indicate that necrosis is not so often a constitutional affection as it is supposed to be.

John B——, aged nineteen, was admitted on Feb. 26th, 1858, with an affection of the right leg. Upon examination, a large sinuous orifice was discovered over the middle third of the tibia on the outer side; one inch below, and more to the inner side, there was another opening, but much smaller, and three inches still lower down, an opening, the size of a sixpence, was seen. A large piece of dead bone (two inches by an inch and a half) protruded from the larger cloaca; this was removed, and a short time afterwards two small pieces came away spontaneously. Upon introducing a probe through two of the cloacæ, more dead bone could be distinctly felt. The patient did not suffer much pain, but was unable to walk. He states that the present affection has been coming on for five years. At first he felt a severe shooting pain in the affected limb, for which a deep incision was made. About eight months afterwards several cloacæ formed, from which an offensive discharge came. This state continued until his admission into the above hospital.

March 3rd.—Mr. Coulson, having determined to remove all the dead bone, made an incision from the superior opening in an oblique direction towards the middle, and extracted a piece of dead bone from under the new bone. The incision was then extended to the inferior opening, and a sequestrum, three inches long, was drawn from under the bridge of new bone, which was obliged to be sawn through, to admit of the dead bone being removed. There was now discovered another sequestrum, just below the head of the tibia, extending across the bone, which with some difficulty was removed.

He went on without a bad symptom till the 8th of March, when he complained of loss of appetite, and want of sleep.

9th.—Still feverish; appetite bad.

12th.—Improving; appetite returning; sleeps pretty well.

15th.—Appetite good; sleeps tolerably, but complains of aching pain in his leg.

16th.—Had a very good night; less pain in the leg; appetite very good. From this time he gradually improved.

June 8th.—The patient is now nearly cured, and will shortly leave the hospital.

WESTMINSTER HOSPITAL.

Case of Diseased Hip, in which the Shortening of the Limb was Reduced from Three Inches and Three-quarters to One Inch and Three-quarters.

(Under the care of Mr. Holthouse.)

Jane H——, aged six years, a delicate-looking child, with an impetiginous eruption on her face, was admitted into Queen Anne ward on the 29th of May, 1857, for disease of the right hip-joint. The whole limb is three inches and three-quarters shorter than the other, and slightly inverted; the shortening results partly from the tilting-up of the pelvis on that side, partly from the femur being shortened, and partly from an arrest of growth of the leg. The right anterior superior spinous process of the ilium is about two inches higher than that of the other; the distance from this process to the lower border of the patella is an inch less than the opposite, and the leg is about that much shorter than the sound one. Some movement of the femur on the pelvis exists. There are no abscesses. The child is quiet, and suffers no pain.

History.—About fourteen months ago, her parents noticed a slight limp in her walk, for which she was punished, they supposing it to be a trick; a short time afterwards she began to complain of pain in the knee and hip; she was therefore taken to the Children's Hospital in Ormond-street, where she was admitted, and remained about three weeks. After she came out (nine months ago) she had a fall, from which time the pain increased. She was then admitted into another hospital, where she remained about four months, and while there the limb gradually assumed its present position; no apparatus of any description having been used, according to her mother's account, during the whole time she remained in the hospital.

July 1st—For the last month, extension has been kept up by means of a long splint, such as is used in fractures of the thigh-bone, and an elastic perineal band; but no alteration is apparent in the outline or length of the limb, nor could any alteration be effected by making extension whilst under chloroform.

8th.—The pressure of the perineal band has caused inflammation and excoriation of the skin about the upper part of the thigh; it has, therefore, been removed.

The patient was now seen by an experienced surgeon of one of our largest metropolitan hospitals, who was of opinion that nothing more could be done for the child. Mr. Holthouse, being unwilling to discharge the little patient without another attempt to improve the position of the limb, on the 20th of July again placed the child under chloroform; and having guarded the perinæum with a stuffed pad, he placed his foot against it, and, laying hold of the limb with both hands, made long-continued and forcible extension till the right spine of the ilium was brought to a level with that of the left. The limb was then put up as before.

August 8th.—The child not being able to bear the pressure of the perineal band necessary for keeping the limb in its improved position, Mr. Holthouse contrived an apparatus for maintaining the pelvis in its proper position without any perineal bandage. The principle of this consisted in making extension of the diseased limb, and counter-pressure with the healthy one, by which means the pelvis was pushed up on the left side and pulled down on the right. The apparatus answered admirably, and the little patient experienced the greatest comfort from its use. It was not removed till the beginning of January of the present year. Since then the child has been dressed, and sits or lies on her bed, or shuffles about the ward by supporting herself with her hands, but she cannot bear much weight on either limb. The deformity produced by the tilting up of the pelvis on the right side has disappeared, and the spines of the ilea are on a level with each other. A slight amount of flexion of the thigh on the pelvis can be made passively; but on the patient herself attempting this movement the pelvis moves with the limb.

Jan. 29th.—The patient was discharged, and the following measurements show the present difference in the length of the two limbs. From the anterior superior spine of the ilium to the lower border of the patella, the right thigh is exactly one inch shorter than the left; from the lower border of the patella to the outer malleolus it is three-quarters of an inch shorter; so that the whole limb has gained two inches in length since her admission, which is as much as is capable of being effected. The right thigh is less in circumference than the left, and more flabby, but the legs are of equal bulk.

The arrest of growth of the right leg, consequent on disease of the hip, has been observed in other cases of hip-joint disease, as well as in chronic affections of the knee joint. Casts of the pelvis and lower extremities of this child taken before the apparatus was applied and after its removal, may be seen in the Museum of the Westminster Hospital.

ROYAL FREE HOSPITAL.

Comminuted Fracture of the Ribs from Indirect Violence, producing Emphysema, Hæmoptysis, and Depression; Recovery.

(Under the care of Mr. T. H. Wakley.)

When we see a case of fracture of the ribs, the result of direct violence, such as a blow, it is generally situated in their anterior half; if the cause, however, has been indirect, they may be broken in two situations, as in the accompanying case, wherein the fourth, fifth, and sixth ribs were fractured at their angles, and near the sternum, from the trampling of a dray-horse over the chest. A similar case was treated at St. Thomas's Hospital, in July, 1856, under the care of Mr. Le Gros Clark. In that case a load of coals fell over the poor man's body, and not only produced the fracture of the ribs, but a wound of the lung, and dislocation of the collar bone, and fracture of the arm and leg, with sloughing of the latter, and yet the poor man not only did well, but left the hospital, as we understood, cured of his injuries. In Mr. Wakley's patient there were emphysema, hæmoptysis, and physical signs of extensive implication of the lung, which was wounded. The peculiarity in the treatment consisted in the free administration of stimulants, which sustained the flagging powers of life, and materially assisted towards perfecting a cure of the lung mischief, as well as the union of the broken ribs, which had been completely effected before the patient left the hospital. In the treatment of fractured ribs, one of the essential indications is to arrest or diminish motion by bandaging the chest; that was attempted here, but, as in other instances, its application at first produced pain and uneasiness; it was, therefore, suspended for awhile, and finally re-applied with good results. We avail ourselves of the notes of the case, through the kindness of Mr. Edmund O'Loughlin, house-surgeon to the hospital.

Mr. M——, a potato porter, aged forty-seven, was admitted into *A* ward on the 30th of April. His history was, that whilst leading a dray-horse across the rails of the Great Northern station, the animal suddenly started, knocking him down and trampling upon him. On admission, he was in a state almost approaching collapse; his pulse was hardly to be felt, and he complained of severe pain in his left side; his breathing was very laborious, and his skin cold and covered with perspiration. On examination, the fourth, fifth, and sixth ribs were found to be fractured at their angles, and again about an inch from their cartilaginous articulations; there was slight emphysema, limited to the seat of fracture; and the crepitation between the broken fragments of the bone was so loud as to be distinctly audible to the persons who assisted in undressing him. Two ounces of brandy were ordered by the house-surgeon, a table-spoonful to be given him at intervals of a quarter of an hour until reaction set in; a broad bandage was applied with a moderate degree of tightness around the chest, so as just to afford sufficient support to the fractured ribs, and restrain in some degree the action of the intercostals, without embarrassing the respiration; and a draught containing twenty minims of tincture of opium, with the same of chloric ether, in one ounce of camphor mixture, to be taken directly—Eleven P.M.: His pulse was still very feeble, and he complained of severe pain at the seat of injury; the respiration was extremely laboured, and the countenance pale, and betrayed great anxiety. The stimulants were ordered to be continued, and warm bottles applied to the feet, which were becoming cold.

May 1st.—The patient has passed a very bad night, and seemed to be sinking; pulse 120, weak and thready; he complained much of his cough. A mixture was ordered every four hours, consisting of half a drachm of tincture of henbane, ten minims of chloric ether, and twenty of wine of ipecacuanha, in an ounce of water.

2nd.—Three A.M.: The nurse called up the house-surgeon, saying the patient was dying. He complained of a sense of great suffocation, his countenance was blanched, and he was gasping for breath, but did not complain of much pain; pulse almost imperceptible. The broad bandage, which had been tightened during the day, was now altogether removed; he was placed in a sitting position, and some warm brandy-and-water was given to him. This seemed to relieve him considerably, and he said he breathed with much greater ease.

3rd.—Dyspnœa better, but still very considerable; there is general mucus and sibilant rhonchi throughout the lungs; pulse 100, still feeble. A small quantity of florid blood has been expectorated. He complains of the cough, and of the "pain and grating of the ribs." Mr. Wakley ordered the bandage to be again applied with a moderate degree of tightness, and to continue his mixture and as much nourishment as he could take.

4th.—Expresses himself easier this morning; still coughs a great deal; sputa bronchitic, with now and then a spot of florid blood in it; pulse 96, weak. To continue the treatment.

5th.—He had an attack of dyspnœa and faintness in the night, somewhat of the same character as that which took place on the 2nd: seems much feebler this morning. Says he feels weaker than he has done yet. Expectoration very profuse; surface of the body much colder than usual. Mr. Wakley ordered five grains of carbonate of ammonia to be added to each dose of his mixture, and to have some warm wine-and-water as well as his brandy.

6th.—Pulse decidedly better; had some sleep during the night; does not expectorate so much; is now taking six ounces of brandy and ten of port-wine in the day and night.

8th.—A great improvement has taken place in the patient; his pulse is much fuller, and has fallen to 90; he takes nourishment freely, but still complains of the pain in his side and the cough. To continue the medicine, &c.

11th.—He is progressing favourably. The bandage was re-applied to-day. Mr. Wakley ordered the brandy to be diminished, and two pints of stout to be given daily instead. From this date he gained ground daily, and with the exception of a continuance of cough and occasional pain in the side, which were present up to a short time before his discharge, no other symptom of importance took place. He was discharged cured on the 30th of May.

This man seems to have led a charmed life. He had both patellæ broken on former occasions, for which he had been treated in the London Hospital, and was also the subject of double albugo, from an injury sustained some years ago, which much impaired his sight.

CHARING-CROSS HOSPITAL.

Scrofulous Pneumonia.

(Under the care of Dr. WILLSHIRE.)

WHAT is *phthisis?* Most persons would answer, the deposit of tubercular matter in the lungs, its softening, and accompanying disintegration and destruction of the pulmonary parenchyma. And, no doubt, in the greater mass of cases when phthisis is presumed to exist, such is its anatomic character. But are *all* instances of phthisis of this kind? Are all cases which are marked by more or less of the usual physical and vital signs and symptoms of pulmonary consumption originally based upon the deposit of *tubercle* in the tissue of the respiratory organs? Some few pathologists assert that all are not so. Graves, Addison, Rheinhardt, and Virchow have maintained this doctrine; and, lately, Dr. Willshire pointed out to us, at the Charing-cross Hospital, a young man illustrating this view of the question—a view which he himself had for some time adopted, and in illustration of the truth of which Dr. Willshire stated he usually met with two or three cases every year. The disease which is mistaken for *tubercular* phthisis, according to the above writers, and to Dr. Willshire, is a form of *scrofulous pneumonia.* (Scrofulous pneumonia, Graves; pneumonic phthisis, Addison; chronic suppurative pneumonic infiltration, Rheinhardt and Virchow.) No tubercular matter is originally (or *necessarily* at any time) deposited in the pulmonary parenchyma; but inflammation of a scrofulous character invades the substance of the lung, eventuating in the exudation of an infiltrating induration-matter, which, instead of becoming absorbed, or remaining indolent, slowly softens, and breaks up, disintegrating the original pulmonary tissue, and giving rise to more or less of both the physical and vital signs of *tubercular* consumption. It is not unlikely, however, that in the course of this form of pneumonitis, true tubercular matter shall also be deposited, but such occurrence is not essential, and does not *constitute* the malady. The result may be said—speaking generally—to be the same both in pneumonic and tubercular phthisis—viz., cough, with purulent expectoration; dyspnœa on exertion; wasting and hectic, &c. But, according to Dr. Willshire, there are one or two symptoms which are worthy of attention, as helping to differentiate the diagnosis. So far as his experience goes, the physical signs are for a long while confined to one lung, and are only *exceptionally* located at the anterior apex; the expectoration is peculiar, more like that in suppuration of the lung in ordinary pneumonia than in tubercular phthisis, but not mixed with sanguinolent matter, except occasionally. Further, there is marked tendency to slight sphacelus or gangrenous destruction of the pulmonary parenchyma, giving rise to a very fœtid odour of the breath and expectoration. We were told that the patient we were examining had once rendered the ward almost unbearable for a time from this circumstance, and that a few months back another patient, under the same physician, had, though in a somewhat less degree, been productive of the same inconvenience. The wasting is less marked and rapid, and more temporary advantage appears to result from treatment than in tubercular phthisis. Dr. Willshire made the remark that in all the cases of this form of scrofulous pneumonia which had come before him, it was the right lung which was first and mainly affected.

ST. BARTHOLOMEW'S HOSPITAL.

Myeloid Disease of the Head of the Tibia. Amputation at the Thigh.

(Under the care of Mr. Stanley,)

Mr. Stanley has remarked, in his work on "Diseases of the Bones," that there is a sort of special predisposition in the head of the tibia to become diseased. On the 22nd of May, a singular case was brought into the theatre for operation, upon which no positive opinion could be pronounced by Mr. Stanley or his colleagues. A healthy, stout, robust, and vigorous man, endowed, apparently, with great muscular strength, had a small, flattish swelling, about two inches and a half in diameter, over the anterior surface of the head of the right tibia, a little below and to the inner side of the tubercle. It was covered with two or three prominent veins, felt slightly soft, and had been slowly growing for some ten months. An incision was made around it at its outer margin of a semicircular form, the skin dissected off, and the tumour sliced off at its base, when it was found to present a malignant aspect. This was attended with much bleeding, and on further examination, it was discovered that the tumour covered the opening leading into a large cavity in the head of the tibia, filled with a quantity of soft plastic material, and from which poured out a great deal of blood. This cavity extended quite close to the joint. A consultation was immediately held, and it was deemed advisable to amputate through the thigh, which was accordingly done by the circular operation. A curious circumstance now happened: the main trunk of the femoral was secured, but no bleeding from any other vessels appeared on loosening the tourniquet, the man's pulse being at the same time pretty good. He was therefore removed, and the stump watched by the dresser.

A careful dissection and minute examination of the disease were made in this case, when it was ascertained that the disease in the tibia was myeloid, possessing the true characteristics of that affection.

During the operation upon this patient, it was assumed that there was malignant disease of the tibia, and, under the peculiar circumstances of the case, amputation was resorted to. That proceeding was the proper one, even had it been known that myeloid disease was the form of malady present, for it had engaged almost the whole of the head of that bone, and so rendered the limb utterly useless.

The question of malignancy in many of these doubtful cases, is one of very great importance to the suffering patient, and if it can be satisfactorily determined otherwise, there is ground for promising an immunity from further disease. Some valuable remarks upon some "Diseases of the Bones," by Dr. Wilks. in a recent volume of "Guy's Hospital Reports," furnish much information on this subject. Osteo-sarcoma is believed by many surgeons to be a harmless disease. He, however, places it as intermediate between cancer and myeloid tumours. Cancer, in its most marked forms, involves the whole bone, from joint to joint, whereas the harmless myeloid tumours are quite round and circumscribed, and osteo-sarcoma is intermediate in position. Twelve cases of myeloid diseases of bone are given in Dr. Wilks' paper, three of them engaged the head of the tibia. The first of these would seem to be the counterpart of Mr. Stanley's case, only in a somewhat more advanced degree, a large cavity occupying the head of the tibia, which had been filled by a "fungoid growth." A fibrous network runs throughout from the cyst on all sides, and in the meshes is deposited the peculiar marrow-like substance.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

Tubercular Cerebritis and Meningitis; Pulmonary Phthisis; Convulsions and Death.

(Under the care of Dr. Cotton.)

It will be clearly seen that the following case was one of cerebritis and meningitis, following pulmonary disease. The symptoms peculiar to cerebritis were the most prominent. The case belongs to a class of very infrequent occurrence at the Consumption Hospital. It seems to be the general character of phthisis for the sufferer to retain his intellectual faculties until the last; even a temporary delirium is an exceptional symptom, and the brain is one of the latest and most unusual depositories of tubercular matter. It sometimes happens that masses of tubercle are found collected within the cerebrum itself, or projecting into it from some portion of its investing membranes, without producing, for a very long time, any acute or even any very obvious symptoms; the patients probably having complained little of cerebral inconvenience, until some rather active inflammation has brought on the fatal issue. In such cases the tubercular deposit seems to have been formed slowly, and the brain gradually to have accommodated itself to its presence. In the present case, however, it is more probable that the small tubercular spots were formed rapidly, and gave rise at once to acute symptoms; and such, we believe, has been the general character of the few similar cases which have been noticed at the hospital. Whether the spots of tubercle were the excitants of the cerebral and meningeal inflammation, or whether they were secondary to the latter, in consequence of its attacking a person of a highly tuberculous diathesis, are questions open to discussion, but, after all, not of much practical moment. It is but too probable that, in spite of the best-directed treatment, all such cases must ultimately prove fatal. From the very onset of the attack Dr. Cotton suspected its character, and predicted its fatal termination.

T. N——, a butcher, aged thirty-two, was admitted on the 28th of May, 1858. He was of middle height; dull, heavy expression of countenance; a red streak on the gums; fingers not clubbed; some emaciation. One sister had died of consumption. Symptoms of ordinary phthisis set in about two years ago; and since that period hæmoptysis has occurred several times. On admission, there was cough with abundant purulent expectoration, and severe night perspiration; the appetite was good; the pulse 78; the respirations 32, and laboured; bowels constipated; tongue white and flabby. He complained of heavy, dull headache, chiefly over the forehead. A physical examination of the chest revealed an advanced state of pulmonary disease. Beneath the right clavicle, humid crackling rhonchi showed that softening was going on; whilst beneath the left clavicle, the bruit de pot fâlé and amphoric respiration, told quite as distinctly that there was a large vomica in that situation.

The following were the prominent symptoms during the progress of the disease:—

May 30th.—Bowels very constipated; sickness; increase of headache, and general torpor; pulse 64.

31st.—Bowels have acted from aperients, but the headache and drowsiness continue; speech is faltering, and he makes a low moaning noise; when roused he is partly conscious, but cannot express himself; breathing slow and laboured; pulse 60, and full; pupils dilated and sluggish.

June 2nd.—Leeches on the temple, followed by a blister to the neck, with cold lotions to the head, have had no effect. Sickness continues; cannot articulate; pulse 68, full and laboured; pupils still dilated and sluggish, especially the right; lies in a partly conscious state, but cannot speak. When roused, he places his hand over his forehead, and plainly indicates the seat of his distress.

4th and 5th.—Symptoms increasing; both pupils dilated; strabismus of the left eye. Is roused with great difficulty. Tongue protrudes in a straight line; no loss either of motion or sensation in the limbs; reflex movements perfect; pulse 52; feeble; deglutition very difficult; voice lost.

6th.—Rather active delirium during the night; has torn his shirt into fragments; moans, but cannot speak; both pupils dilated and uninfluenced by light; permanent strabismus of the left eye; tongue white; pulse 48; respiration slow and laboured.

7th.—Convulsions came on this morning; lies comatose; breathing stertorous; pulse 60; no paralysis of the extremities; urine and fæces passed unconsciously.

8th.—Convulsions increasing; countenance much distorted. He died at six A.M.

The post-mortem examination of the chest merely confirmed the original diagnosis; broken-down lung and large vomicæ being discovered. No other organ of the visceral cavities presenting abnormal appearances. It is unnecessary to refer to anything but the head.

On opening the skull, the membranes were seen to be very vascular, and the cerebrum itself was much injected, although its consistence was normal. Both ventricles were fully distended with clear serum. Upon the surface of the brain, and situated either upon or within the pia mater, were a number of white, consistent bodies, of uniform size, but not exceeding that of the smallest pin's head; they were irregularly scattered, and not arranged in patches. Under the microscope they were found to consist of irregularly-formed cells, intermixed with granular matter.

SAMARITAN FREE HOSPITAL.

Obliteration of the external Os Uteri, followed by Leucorrhœa and Amennorrhœa; cured by operation.

(Under the care of Dr. Routh.)

The following case is one which could only have been cured by an operation of the kind resorted to. The obliteration of the internal os may probably be connected with the patient's former pregnancy. The wood bougies covered with cotton produced but little pain, except for the first day, and these were only of a colicky character, and were at once relieved by opium. The result of the treatment, as we subsequently learned, was perfectly successful:—

S. W——, aged twenty-three, a servant, was admitted on May 5th, with obstinate amenorrhœa of eleven months' duration. At that period she was confined of a still-born, putrid infant, after having been five days and five nights, as she says, in labour, and then she was only delivered by instruments. Had no trouble with her milk; lochia persisted for one month. She has been under general treatment, with iron and aloes, for about three months previous to admission, without effect in influencing the catamenia. Caustic was twice applied within the os as far as it could go up, once in substance, once in powder, with Simpson's instrument, without effect. She is not pale, but weak, with considerable pain in the back and down the leg, and much headache. There has been a sufficiently copious leucorrhœa, which is somewhat of a smegmatous odour, and very frothy, filled with bubbles.

Examination.—Os and cervix natural. The opening upwards, however, does not extend above half an inch, where it is closed. The smallest probe cannot be passed up. This at once accounts for the amenorrhœa.

Operation.—The uterus being pulled down by a tenaculum, a bistoury was passed directly upwards parallel to the axis of the lower vagina for about one-third of an inch. A minute caoutchouc catheter was now forced into the opening, and penetrated inwards to about two inches above the external os. After a few minutes it was removed, and a pointed piece of wood, about as thick as the head of a pin, surrounded by cotton and oiled, was pushed in and left in the womb. This was renewed every day for three or four days, and then a sponge tent introduced. The next day the cavity of the uterus was dilated to the size of the index-finger. About four ounces of warm water were now injected to wash out the cavity. This water did not return at once, but gave intense pain. Thirty-five drops of laudanum were now given, which relieved the pain, and the water came away in an hour, with relief to all the symptoms. A well-bent Simpson's sound introduced the next day could be completely turned upon itself within the cavity of the uterus, above the seat of the former obliteration of the os.

Our attention was called to another case of severe dysmenorrhœa, with sterility. Catamenia began at the age of eighteen; regular from that period, although so with intense pain at the back and bottom of the stomach, which is very great for two or three days, and then wears off. Married fourteen years, but has no children. The catamenial discharge resembles "strings of congealed blood." Between the periods she has a leucorrhœal discharge, sometimes yellow in colour. Examination displayed a projecting os, with deep posterior vaginal cul-de-sac. No os uteri is visible as such; but there are two or three bloody points, about the size of pins' heads, on its surface. One of these only, when pressed forcibly against by the sound, gave way, and the instrument penetrated to an inch and a half. This opening was enlarged by the hysterotome to about a quarter of an inch at least on each side. The hemorrhage and pain which succeeded were trifling. The opening was plugged by a wooden bougie, covered with cotton and well oiled. This treatment was persisted in for a week, till the opening was as large as the little finger, and then all further interference rendered useless.

Dr. Routh in such cases prefers this kind of bougie to the sponge tent. It is less irritating, obviates all offensive discharges, and effectually prevents, if persisted in for a few days, all tendency to the reconstriction of the os and hemorrhage. It can be kept in the os, if any tendency be observed to its protrusion, by a plug of cotton in the upper part of the vagina.

Clinical Records.

EPULIS INVOLVING THE ALVEOLUS.

From being primarily a very simple affection, as we have already stated on a previous occasion, epulis may so increase and involve subjacent structures as to assume a more serious aspect. A favourite seat of the disease is at the inner surface of the molar teeth of either side of the lower jaw, springing from the periosteum and edge of the alveolus, and occasionally affecting the osseous walls, and forming a distinct tumour, which displaces the teeth and neighbouring structures. When this condition has been assumed, we have seen Mr. Fergusson and others remove the portion of jaw thus affected. Occasionally, however, it happens that the careful removal of the tumour itself at its base proves sufficient to effect a radical cure.

On June 19th, a young married woman was given chloroform in the operating theatre of St. Bartholomew's Hospital, by Dr. Martin, and on her mouth being opened a tumour was seen, springing from the alveolar edge of the inner surface of the left side of the lower jaw, corresponding to the two anterior molar teeth. This was an epulis, which had been slowly increasing in growth for some years. Mr. Stanley cut around its base, after the neighbouring teeth had been extracted, and with a pair of curved forceps removed it, taking the precaution to leave none of its base behind. The operation occupied some time, because it was performed without making any incision through the cheek, thus avoiding the deformity of a scar. The growth in this patient, from being at first fibrous, had become almost true bone, though somewhat spongy, and with it was removed as much of the alveolar process as was necessary to render extirpation complete. The patient is doing well, and we have no doubt will make a good recovery.

Mr. Lloyd, at this hospital, invariably removes an epulis with the forceps, and touches it afterwards with some escharotic. He has lately seen one of his patients who was operated upon in this way fourteen years ago, and in whom there has not been any return of the affection. Mr. Stanley's case forms an interesting addition to the one of Mr. Tatum's at St. George's Hospital, which we gave a few weeks ago.

SYME'S OPERATION FOR REMOVAL OF CANCER OF THE LOWER LIP.

There is a patient now in the London Hospital upon whom Mr. Curling resorted to the form of operation recommended by Mr. Syme in the removal of extensive cancer of the lower lip. It was performed on the 10th of June, and by the 24th the man was going on very well indeed. His age was fifty-three, and the disease had been existing for four years, and had not only involved all the central part of the lip, but it was quite fixed and adherent to the lower jaw. These adhesions were separated under chloroform, when the cancerous disease was removed by a triangular-shaped incision, consisting of two incisions, extending from the angles of the mouth to the chin. These cuts were then carried obliquely downwards and outwards on each side, under the body of the jaw, and made to terminate in a slight curve afterwards and upwards. These flaps, after being detached from any subjacent connexions, were so raised upwards, that the original triangular incision came into a horizontal line, and was made to constitute the margin of a new lip. The other incisions below the jaw were brought together vertically, the apex of the chin filling up the central space. The parts were kept in apposition by twisted and interrupted sutures. So far as we could judge at the end of the first two weeks, we should say that the operation will be a successful one.

STAPHYLORAPHY.

A lad of sixteen years of age, with the simple form of fissure of the soft palate, but slightly affecting the posterior margin of the hard palate, was submitted to the usual form of operation of staphyloraphy adopted by Mr. Fergusson at King's College Hospital, on the 26th of June. This proceeding was perfectly successful, although all the circumstances of the case were by no means so favourable: thus the boy was of small stature; he had a small mouth, which was besides long and narrow, the soft part of the palate was difficult to get at, and he moved his tongue a good deal during the operation, a proceeding which renders it sometimes of great difficulty. He had also a wry neck, thus preventing the holding of his head in such a way as to facilitate the steps of the operation. There was much less bleeding in this case than is usually seen, because the knife was used but to a limited extent.

On the same occasion, a young man was operated upon for hare-lip, for the second time, the first having been performed ineffectually when he was two years old; it occupied the left side of the mesial line, as is noticed in ninety-nine cases out of a hundred. This patient had also a fissure through both the hard and soft palates, which had been remedied by staphyloraphy, by Mr. F gusson, with success, a fortnight before. Union was perfect, but the parts were still a little tender.

We believe that this formed about the sixtieth case or upwards of this operation performed by Mr. Fergusson, and all of them with success, except two, the failure of which depended upon too many stitches and their being drawn probably too tight, which permitted of sloughing.

EXCISION OF THE ASTRAGALUS IN A BOY, AND OF THE OS CALCIS IN A GIRL.

Two very interesting surgical cases are to be seen at the present moment in University College Hospital, under Mr. Erichsen's care, in whom operations for the removal of the principal bones of the tarsus have turned out quite well. The first of these is a delicate-looking but healthy little girl, five years of age, who was admitted on the 26th May with disease of the left os calcis, commencing most probably, as the history of her case would show, in infancy, and slowly progressing until rendered quite incapable of moving about. There were several fistulous openings which lead to diseased bone, and it was considered the os calcis alone was affected. On the 2nd June the remains of this bone were removed by Mr. Erichsen, in the manner which he has recommended—namely, cutting around the back of the foot instead of across the heel. A slight portion of the astragalo cuboid articulation was affected, but the calcaneo-astragaloid was healthy. The little girl was removed to her bed, and carefully attended to, and within two weeks the entire wound had perfectly healed up, but principally by adhesion. When we saw her again, on the 23rd, the foot looked healthy, with but comparatively trifling deformity, and will very shortly prove a useful member. Besides this case, another of but partial caries of this bone was successfully treated by gouging away the carious bone.

The other case, that of a boy, seventeen years of age, was of disease of the astragalus of the right foot, for which he was admitted on the 7th June. It had been existing only four months, an apparently short time. The lad, however, states that when very much younger he had an abscess in the situation of the disease. Mr. Erichsen removed this bone on the 9th June, and found it necessary to take away both malleoli; and although little more than two weeks have elapsed, the boy is going on as well as could be desired. There is free and healthy suppuration, and a disposition to healthy action and union of tissue.

FALL OF A CHILD FROM A THIRD-STORY WINDOW.

When we hear of such an accident as the fall of a child from a great height, we expect to learn that, if death has not been immediate, the injuries are of such a character as subsequently to destroy life. Such an instance occurred in November last: a male child, of two years and a half, got between the bannisters of the stairs of a second floor, slipped through, and fell a great depth, the fall was partly broken, but the skull struck the floor with great force. Great swelling and effusion of blood ensued, and the escape of a good deal of brain substance through a small scalp-wound, which was found, on his admission, under Mr. Wakley's care, at the Royal Free Hospital, to communicate with a fearfully extensive fracture. The child of course died, but it remained alive and unconscious for three or four days.

A more remarkable accident than this is now under the care of Mr. Alexander Marsden, in the same hospital. A little girl, two years old, fell out of a third-story window on to the pavement, on the 24th June. When taken up, the right arm was found to be broken, the back much bruised, and the face somewhat scratched; the child was also insensible, and presented symptoms of concussion of the brain. She was taken to the hospital in a state of extreme collapse, and vomited freely. These symptoms gradually passed off, and in two days—on the 26th—she was quite sensible and lively, and by the 29th was playing about. The arm was put up for the fracture by Mr. Marsden, and it is probable a good recovery will ensue. The fracture was a simple one, with a slight wound near the elbow.

It is remarkable that the injuries in this case were not of a more serious character than those of the first child, inasmuch as the fall was unbroken. There is not now the slightest evidence of any cerebral mischief or spinal injury. Probably, from the fact of its being fractured, the elbow broke the fall, and so lessened the shock of the body against the pavement. The child left the hospital quite well on the 6th, but with the fracture still put up.

FIBRO-PLASTIC TUMOUR IN THE ANTERIOR PART OF THE THIGH.

A healthy and stout girl, about twenty-two years of age, underwent the operation of removal of a tumour from her left thigh, by Mr. Cutler, at St. George's Hospital, on the 1st of July. It appears that she was admitted a month before; but as she felt no inconvenience nor pain from the growth, it was decided to leave it alone, and she left the hospital. Subsequently it began to increase and became painful, and she was taken into the institution a second time. The early history of the case was extremely imperfect: the girl had only noticed it for six months, but whether it had existed much longer it was quite impossible to determine. The diagnosis of the nature of the growth, therefore, was extremely difficult; and a question arose as to whether the main trunk of the femoral artery passed through or around it. Latterly, Mr. Pollock and Mr. Cutler thought that the artery could be felt below it. Chloroform was administered by Mr. Potter, when an incision, several inches in length, was made over the anterior part of the tumour; and after much patient dissection, the tumour, the size of an orange—smaller than it appeared before the operation—was completely removed. It had lain between the rectus and crureus muscles, and its bed formed a very deep cavity; the femoral artery passed around it, as was suspected, but its sheath was exposed for a couple of inches. Some of its deep branches were wounded in the removal, the hæmorrhage being commanded by ligatures. A section of the tumour showed it to be fibro-plastic, and, therefore, non-malignant, partaking, however, a good deal of the gelatinous in external character, possessing a uniform, clear, transparent, jelly-like consistence.

TRAUMATIC PERITONITIS AND PLEURITIS; RECOVERY.

Severe injuries manifest their effects in a variety of ways. If a blow is sudden, over one of the abdominal viscera, for example, it may produce a rupture, followed by its usual train of consequences. But sometimes, if the structures have yielded to the violence of the concussion, other effects may ensue, as was recently verified in a case in University College Hospital, under Mr. Erichsen's care. A healthy labourer, thirty-six years of age, was admitted on the 17th of June, after receiving a blow from the wheel of a dray just over the hepatic region. Within twenty-four hours unmistakable symptoms of both pleuritis and peritonitis set in, which yielded most speedily to venesection from the arm to the extent of twenty-four ounces. He was put upon antimony, but as it was followed by the most extreme collapse, it was stopped, and the treatment changed to carbonate of ammonia and senega, with the best results. We saw him again on the 23rd of June, when all the symptoms of inflammation of the two serous membranes had wholly disappeared. His medicine was, however, still continued, and he was approaching to convalescence. The good results witnessed in this case are no doubt attributable to the early bleeding, which produced a very decided influence upon the pain. Conjoined with the treatment mentioned, were, we believe, fomentations, &c. He left the hospital a few days after this, quite well.

THE ACTUAL CAUTERY AS A COUNTER-AGENT IN SUB-LIGAMENTUM PATELLAR BURSA.

Bursæ naturally occur on the lower, superior, and outer parts of the patella, and sometimes enlarge and form troublesome tumours. When on the anterior part of this bone, they form the well-known housemaid's knee. A very rare situation for an enlarged bursa to appear is posterior to the ligamentum patella, giving rise to an indistinct and dubious swelling. A case of this kind is at present under Mr. Hilton's care at Guy's Hospital, in which the right patella is thus affected. The patient is a stout, healthy man, aged twenty-four, and was admitted on the 12th of May. There were no inflammatory symptoms present, but the case was treated on the 29th ult. by the free and extensive application of the actual cautery over the anterior and lower parts of the knee-joint, as a counter-agent in arresting the growth of this bursa, or to produce its resolution. It is, of course, so near the articulation, and probably encroaching upon it, that any of the ordinary surgical means of relief cannot be thought of. We shall watch the effects of the treatment employed, and again refer to the subject. Should this bursa at any time inflame, this action may extend to the knee, from simple continuity of tissue, and produce serious mischief—a contingency which is much to be feared.

MISCELLANEOUS TUMOURS.

A young married woman was the subject of an oval growth about four inches long, in her left axilla, for some years, and came under Mr. Stanley's care at St. Bartholomew's Hospital. Her general health was perfect, but this tumour gave her a good deal of uneasiness from its situation. When the arm was extended, it became quite prominent, and was freely movable; its consistence was firm, but with an apparent elasticity about it, as if due to its being a cyst. It was removed by Mr. Stanley on June 19th, under chloroform given by Dr. Martin, and proved to be a cyst filled with a steatomatous material, and thus thoroughly benign. The wound has healed, and the patient is quite well.

A tumour of a totally different character was recently submitted to treatment by Mr. Erichsen at University College Hospital, which was situated partly over the left side of the sternum and above the left nipple. It seemed to be divided in two by a sort of septum, and the growth resembled a short hour-glass, the bulbs of which were as large as a small orange flattened. Fluctuation was distinct, but no impulse was given on coughing. It was therefore tapped in its most depending part, and exit given to several ounces of pus, and, as both bulbs communicated with each other, the evacuation was complete. There was no history to account for the presence of this abscess, which had been but a few months coming, and had produced some absorption of the surface of the bone of the sternum. The patient was a young man who had served in the Crimea. We saw him a fortnight after, when it had re-filled, and this time was opened with a common bistoury, and a piece of lint inserted into the opening thus made, to permit of free exit to the matter.

We have already given descriptions of several examples of tumours affecting the female organs of generation, which have been successfully extirpated. On the 23rd June, Mr. Erichsen removed an hypertrophied growth several inches long, which had invaded the clitoris of an elderly married woman, the subject of it for some years. There was very little hæmorrhage after it was excised.

On the 26th ult., a tumour of the size of an orange was removed from over the right gluteus muscle of a female by Mr. Stanley; it had been growing many years, and was found to be fatty, turning outwards almost as soon as an incision was made over it.

ARREST OF CANCER IN THE AGED.

On the 6th of July, at the Cancer Hospital, we were shown a perfectly healthy-looking old woman, eighty-two years of age, under Dr. Marsden's care, with a ruddy complexion anything but indicative of malignant disease. Her left breast had been afflicted with scirrhus for four years, and she had been an out-patient at this hospital just twelve months. Her breathing for many years had been asthmatic, and her complexion could not be attributed to any disease of the heart. Under treatment, especially the local one of embrocation composed of equal parts of liquor plumbi, almond oil, distilled vinegar-and-water, the disease has become quite stationary, and the tumour movable and somewhat diminished in size. She did not seem to suffer any inconvenience from it, but was directed to avoid meddling with it. Tonic internal remedies had been administered at the same time, such as calumba and soda powders. Her case is an example of many others in which the disease becomes arrested, and remains in a quiescent state for many years, with a comparative immunity from suffering. In a considerable proportion, the disease is lessened by atrophic absorption, which goes on sometimes to an extent sufficient to remove nearly every vestige of the affected mammary gland. A very natural question at once suggests itself in the case of this old woman, and that is, would her life be prolonged by removal of the disease, either by the knife or by caustics? Very little thought is necessary to afford an answer. Neither of these measures in such a case as this would hold out the least prospect of a prolongation of life, and we think, when the period of her dissolution does arrive—an event most probably remote—it will not be caused by the presence of the cancer of the breast.

An old woman, aged seventy-seven years is at the present time in University College Hospital, under Mr. Marshall's care, with a rather prominent cancer of the left breast, which has been seen by many surgeons, who have desired to remove it by the knife. But such is her dread of any operation, that she is anxious to have it removed by caustics, notwithstanding the amount of suffering which it may entail, and which is most likely seriously to impair her general health. The disease in her has been present seven or eight years, and extending only the last eight or nine months. She is from the country, and remarks that she is too old for any operation.

THREE OPERATIONS FOR VESICO-VAGINAL FISTULA AND PROLAPSUS UTERI.

On the 19th, the students at St. Mary's Hospital had the opportunity of witnessing operations by Mr. Baker Brown upon three different cases:—

Case 1. *Vesico-vaginal fistula.*—Mr. Brown stated that he had already operated upon the patient, Mrs. Z——, sixteen times, and had tried almost every operation which had been recommended for this distressing complaint. The parts were so much hardened and thickened as to be nearly cartilaginous. He had already been obliged to turn the os uteri into the bladder, and the opening which had originally been of large size, was reduced to two small ones. The edges of these Mr. Brown pared, and then put a silver button upon each, after the plan of Dr. Bozeman.

Case 2. *Prolapsus uteri.*—M. N——, forty years of age; the patient was confined of her first child two years ago, and had a rapid labour; she got up in a fortnight, and went about her ordinary work. In six months she had great bearing down, and perceived a small tumour make its appearance between the labiæ. This soon increased to the size of her fist. She used various injections and pessaries, but without benefit. Mr. Brown performed his usual operation. When he began to remove the mucous membrane from the edges of the vulva, he discovered an encysted tumour, the size of a pigeon's egg, which he carefully dissected out. He brought the pared edges together in the usual way.

Case 3. *Vesico-vaginal fistula.*—Mrs. D——, aged twenty-six, was delivered in March last, of a still-born male child, after a long and severe labour. The catheter was used for the two days succeeding the labour, after which her urine began to dribble away. The opening was about an inch long, situated at the neck of the bladder. Mr. Brown pared the edges, and brought them together with wires and shot, after Bozeman's plan.

On inquiring at the hospital about the above cases, we find that when the buttons were removed in the first case, it was found that neither opening had entirely healed; and that as the patient's state of health was bad, she had gone out for a short time before being operated on again.

The second case was entirely successful.

In the third case the greater part of the opening had healed, with the exception of a small portion which admitted the end of a director. Mr. Brown subsequently operated upon this again; and when the button was removed, on June 26th, the opening was found entirely healed, and the patient could retain her urine perfectly, and for any length of time.

CHRONIC BRONCHITIS; LARGELY-INCREASED VITAL CAPACITY.

R. D——, aged forty-two, a waterman, residing at Deptford, became a patient at the Hospital for Consumption, under the care of Dr. Edward Smith. Had a first attack of dyspnœa, cough, and loss of appetite three years ago. He was then laid up five weeks, but recovered, and had no return of the disease during the following winter. Eighteen months ago, the dyspnœa became permanent, and since then has continuously increased. His aspect is not unhealthy, but the configuration and movement of his chest and mode of inspiration indicate confirmed bronchitis. There is no hereditary taint of asthma in the family, and he never had hæmoptysis. His appetite is bad, and bowels regular, and he has lost flesh and strength. He complains of cough, expectoration, and dyspnœa, but the latter is beyond comparison his most severe symptom. The throat is wide and anæmic. His vital capacity, after numerous trials, is 125 cubic inches. There is greatly diminished resonance in the clavicles, but very little vesicular murmur, and with all the respiratory sounds indistinct and distant.

On the 23rd of January, 1858, a solution of nitrate of silver was applied to the throat, and one-twelfth of a grain of morphia given twice a day, with colocynth and mercury pill every alternate night.

On the 3rd of February, the morphia had affected his head, but there was a little less dyspnœa. The appetite was bad. He was then ordered iron and quassia, with one-sixteenth of a grain of morphia thrice a day, and thenceforward progressively improved in health and cough.

On the 1st of May, the dyspnœa still existed, but was much diminished; his health and appetite were very good, and the cough and expectoration very little. His vital capacity had increased to 155 cubic inches.

Dr. Smith pointed out the fact, that in cases of chronic bronchitis, without perceptible emphysema, there is always a diminution in the vital capacity, and that the chief object of medical treatment is to restore this, an object which, as this case proves, may be in a great measure accomplished. The plan recommended is in addition to the best methods for the improvement of the health, the regulation of the chest movements, and the complete distension of the air-vesicles.

SYPHILITIC NECROSIS OF THE CRANIUM.

When the bones are affected in syphilis, they become so as the result of the more remote and severe effects of the constitutional disease in its tertiary stage. The patient has generally gone through the other stages of the disease, and has suffered from skin eruptions, sore-throat, &c. The indiscriminate and too extensive use of mercury at one time was as much a cause of the bones becoming extensively affected as the malady itself.

At the present day, although syphilis is not less common (in fact it is more so), diseases of the bones are rarely seen occurring to any considerable extent, owing to the improved system of treatment which is adopted. Yet cases are seen now and then of syphilitic caries of the bones of the skull, which remind an old surgeon of the times gone by. Some striking examples are figured in a fasciculus published in 1824, containing lithographic drawings from the preparations in the museum of the Army Medical Department at Chatham, to which we would refer the student.

At the London Hospital we recently saw a female, twenty-six years of age, under Mr. Curling's care, with syphilitic necrosis of the skull affecting various parts of the upper surface, but especially over either parietal protuberance. Exfoliations of the outer table, and latterly of the inner table, of the skull had been several times removed, so as to expose the dura mater. These were of the size of a half-crown piece. She has besides nodes about the forehead and tibia, and is going on pretty well under treatment, conjoined with generous diet. The cranial openings are contracting, but they illustrate very well the extent to which tertiary syphilis sometimes will go. The patient has lost the peculiar cachectic look she had on admission into the hospital.

SEROUS BRONCHOCELE.

Instances of serous bronchocele now and then present themselves to the notice of both physicians and surgeons at our large hospitals. We recollect an example under the care of Mr. Solly, at St. Thomas's Hospital, in an elderly woman, in Queen's ward, about two years ago, who was tapped to the extent of a pint, the fluid being serous, and again collecting at the time we saw it. The patient, however, left the hospital without anything further being done. A few weeks back, an analogous case, in an elderly woman, presented itself to the notice of Mr. Erichsen, at University College Hospital, the prominence depending most likely upon the presence of a cyst within the gland, containing serum. The patient refused to enter the hospital, and nothing was therefore done, although she had come out of the country expressly for surgical advice.

Such cases as these are sometimes benefited by tapping. When punctured they have been known to inflame, suppurate, and their lining membrane to slough and contract. We have known instances, however, which, when punctured, have given exit to blood instead of serum. A remarkable instance of this kind, diagnosed as a pulsating bronchocele, was under Mr. Erichsen's care, last year, of a young woman with a very large tumour indeed, in whom it was found necessary to tie the superior thyroid artery of the right side, with but temporary benefit. The treatment afterwards consisted of the injection of the perchloride of iron on several occasions. There was, however, frequent hæmorrhage from the wound of the ligature, and on one occasion she lost a good deal of blood in the night without knowing it, which weakened her very much. She ultimately left the hospital, but as the growth was extending, a fatal result probably ensued. When enlargement is producing danger of suffocation, ligature of the vessels supplying the tumour has been advised, or the use of a seton, or finally, extirpation; but very few examples of success have occurred to encourage the practice of either of these.

Medical Annotations.

"Ne quid nimis."

THE THAMES.

Tens of thousands of tongues are busy still with questions touching the details of the various systems proposed for the drainage of London and the purification of the Thames. The river itself, meanwhile, as though content with giving the emphatic warning which we lately felt, has partially subsided into an inoffensive neutrality. Greenwich landlords avail themselves of this pleasant lull to feast the press with whitebait, and proclaim through its myriad voices, that at Greenwich, at least, no bad odour prevails; that whitebait flourish uninjured; and that health and pleasure dwell in their fishing-halls. This was to be expected, and is both credible and well-attested. The larger question of provision for the future is not the less urgent. *The Times* judiciously encourages an active discussion upon the various methods proposed; but wide differences prevail between those most fitted to discuss the matter. The engineers, proud of the skill with which all the difficulties of a vast intercepting scheme have been met and apparently conquered, are fascinated for the most part by the professional merits of this plan, and predisposed to award it the palm. They start with a proposition which does not command our unqualified assent. They assume that, granting the Thames to be the *cloaca maxima* of London, there is in this a great reproach to this mighty city. History shows clearly enough that the founders of all great cities have sought the neighbourhood of some broad cleansing stream. "In the long process of development through which cities pass," says one of the most philosophic writers of this age, "commerce and other functions of civilization come to usurp upon the earlier functions of such rivers, and sometimes (through increasing efforts of luxurious refinement) may come entirely to absorb them. But in the infancy of every great city, the chief function for which she looks to her river is that of purification. 'Be thou my huge *cloaca*,' says infant Babylon to the Euphrates, says infant Nineveh to the Tigris, says infant Rome to the Tiber. So far is that reproach from any special application to London." That we should have done as we have accords simply and wholly with that which is natural and proper. Amongst the inconveniences of our monstrous growth is this inability further to utilize our river. Science then must help. Certainly interception would be the most satisfactory, and we believe it to be within practicable attainment. Chemists urge, as against the engineer, the feasibility of precipitating the fæcal and other solid matters, collected into various reservoirs, deodorizing the whole, and sending the water in a clarified state into the river. This scheme, as is well known is carried on at Leicester and Tottenham. It would be far more economical, but it is doubtful whether it would be efficient. There remains always the danger of leaving pulverulent organic matter in solution, which may undergo dangerous fermentation.

The Government are disposed to accept the scheme for interception—to authorize the Metropolitan Board of (No) Works to raise £3,000,000, and to carry out the scheme. It is somewhat more than probable that the Board will decline that responsibility. In this event, the onus will rest with the executive Government. They will be glad enough to shift the unwelcome burden; but the public are still more interested in obtaining security that the work will be well done than in relieving them of their responsible functions.

OUR INFANT POPULATION.

It fares hard in the world with the weak and defenceless. By a heaven-given instinct the most weakly and incapable of all earthly creatures, the human infant, is hedged round from its nativity by the ceaseless and urgent cares of the mother. Sad exceptions there are, on all sides, to the workings of this protective love; to this end testify the records of our foundling hospitals and our workhouses. Still more sadly do the tables of infanticide proclaim how this most commanding emotion of humanity is sometimes beaten down and sometimes depraved; yet we may declare that these are very exceptional facts, and that this great nation is, as a whole, pure from the reproach of forgetting the sacred duties attaching to the parental relationship. But withal there rises up against us an accusing array of figures, which tells of a frightful infant mortality. This fact we must set off partly as due to the hard exigencies of an overgrown civilization and an over-crowded population, partly also to a still deficient sanitary state system. There remains a large proportion which may be traced clearly enough to the influence of a deplorable ignorance, amonsgt the masses, of the proper treatment of infancy—an ignorance which lies so deeply as to affect even the perception of infant wants, and which wholly annuls the proper ministration to those wants. The fate of the child depends greatly now upon the station of its parents and upon their intelligence; and frequently even more upon these than upon its own vital power, or the perfection of its organism. The difference of fortune we cannot control, but we may counterbalance some of the evils now attendant upon poverty. The rich man's child has not only the advantage incidental to its position, but it has also careful and intelligent tending. It is this for which the poverty-born infant too often languishes. We have noted, therefore, with earnest approval the well-judged efforts of the committee of the Ladies' National Association for the Diffusion of Sanitary Knowledge, to spread broadcast amongst the mothers of the poor plain and forcible instructions "how to manage a baby," how to keep children healthy, how to feed a baby with the bottle, and so forth. Simple and self-evident as are some of these directions, calculated often to produce a smile, we have nothing else than an earnest approval to bestow upon them. They form a code of instructions which every mother can understand, and not one can read without profit. This movement aims at the very root of the evil which we deplore. The candle which is thus held out in the darkness may not throw its light very far; but so far as it extends, its rays will be faithful and beneficent. We would by no means imply that somewhat more of enlightenment is not needed amongst mothers in the higher classes of society. But lately was recorded the verdict of "death from over-feeding" at an inquest on a well-born child. Very strange doctrines prevail fitfully amongst those upon whom Fortune has smiled benignly. Not many, perhaps, share fully the theory of that Penthesilean mother, who made a point of turning out her new-born infants for a pretty long airing, even on the day of their birth, and of whom it is recorded that once only was she baffled, much to her indignation, when the little thing happened to be born at half-past nine P.M., so that by the time its toilet was finished the watchman was calling "Past twelve and a cloudy night." She was thus reluctantly compelled to countermand the orders for the day's exercise, and considered herself, like the Emperor Titus, to have lost a day. There are many, however, who entertain the strongest bias in favour of a Spartan discipline. Of such we can only say that the sooner they are disabused of this erroneous opinion the better for their children. The tracts issued by the Ladies' Assciation are well calculated to disperse many pernicious errors, and so in their generation they will be useful. On the great question of the food of infants, Dr. Routh has published a remarkably interesting and valuable pamphlet, which we trust will obtain a very general circulation.

MEDICAL HONORARIA.

L'Art Médical est la plus noble des professions et le plus triste des métiers. Years of training, and many hundreds of pounds sterling, are expended before the aspiring student stands before the world a fully-fledged medical man. If foregone risk and pains bear interest—if actual expenditure be fairly estimated—if skill and education bear any marketable value, then a doubt cannot rationally exist that a medical man is entitled to ample and honourable remuneration for the application of capabilities acquired at so much cost. Yet this remuneration is habitually dealt out with a niggard hand. Sometimes it is withheld altogether: more often it is contested ungraciously, pared down with searching ingenuity, and scraped away to the smallest possible dimensions. A very striking instance of this ungracious and ungenerous practice was afforded by a case tried in Nisi Prius, before Mr. Justice Erle, this week. Dr. Edwin Lee, while spending the winter season at Hyères, according to his annual custom, was requested by a gentleman, there resident, to undertake the medical charge of his failing health. Subsequently, Dr. Lee was desired to accompany him to England. He travelled with him as far as Lyons. Later, when in Paris, Dr. Lee was summoned to Lyons by telegraph. The patient succumbed to his disease. His executors resisted a claim for 150 guineas, which certainly cannot be justly considered as in any way excessive. Mr. Lane and Mr. J. H. Johnson concurred in opinion that the charge was very moderate. We fully endorse this opinion. Following the facilities afforded by railway travelling and other improvements in locomotion, a corresponding decrease has been admitted in the travelling fees of physicians; and the custom of the profession appears to have fixed the fee for long distances at half-a-guinea per mile in lieu of the old tariff, which counted guineas by the milestones. Dr. Lee's claim was considerably below this modified scale; and looking to the whole history of the transaction—the previous attendance, the two journeys, and the distances traversed—we are of opinion that the sum of £50 awarded by the jury was ridiculously small, and wholly inadequate as a recompense for the services afforded.

PATHOLOGICAL PHOTOGRAPHY.

It is unfortunately too true that we are not sufficiently inclined to recognise and avail ourselves of many of the discoveries of modern science, and hence we are deprived of numerous advantages, which we repudiate simply because they are the results of something new, with which past generations were not familiar. For instance, photography has not yet fulfilled a tithe of the indications of which it is capable. The artist is but half inclined to admit that it can be an assistance to him; the architect does not invoke its aid as often as he should; the astronomer and microscopist do not, as a general rule, believe that it can be brought to usefully illustrate their respective sciences; and the surgeon employs it but very seldom, and then only to delineate some case of extraordinary deformity or unusual interest. We have been furnished with a proof of its applicability to anatomy by our French neighbours. Some time since there were at Clamart some stereoscopic views of regional anatomy. We now learn from *La Lumière* that some admirable representations of lymphatic vessels have been produced, and that M. Nélaton has attached to La Clinique a photographic artist, whose special duty it is to preserve representations of cases before and after operation, thus providing a record of each interesting case, which will be hereafter useful, not only as a means of reference, but of instruction.

It is easy to imagine how this idea can be extended in its application to almost every branch of the profession. It would preserve accurate delineations of any anatomical abnormalities met with in the dissecting-room; it would provide an invaluable record of success or failure in the treatment of deformities; stereoscopic views of the chest in health and disease would be very interesting; in fact, its more extended application would be fraught with great interest and benefit to both physician and surgeon, whether they had recourse to it in the ward, the operating-theatre, or dissecting-room.

This is obvious, and we hope the day is not far distant when photographers will be attached to *our* hospitals and museums, for the purpose of preserving and diffusing interesting facts amongst the members of the profession. How important and valuable a note-book or museum catalogue would become if illustrated by photographs taken from patients during the time they were under inspection! We not only hope, but expect to find that English surgeons, who are generally men of science, will develop to its fullest limits the application of photography in illustration of many of the details of the profession; and if our expectations are realized, we anticipate for them a rich harvest of interest and instruction.

THE HEALTH OF LONDON: A NOTE OF WARNING.

Many an anxious eye now scans weekly the bills of mortality, which were wont to be passed carelessly unread. It is probable that the readers of the Registrar-general's Report have not failed to draw their own conclusions as to the increased number of deaths from diarrhœa and cholera, or choleraic diarrhœa, during the week ending June 26th. It was fatal in 54 cases; the numbers of the two previous weeks were 18 and 31: the number attained was double the average for corresponding weeks. This is sufficient to indicate the necessity for great caution during the hot weather which we are still likely to pass through. Every hygienic precaution should be taken by individuals, by householders, by persons in authority, and by medical officers of health. Without sounding any untimely note for alarm, we may assert that there is sufficient ground to call for the closest attention, on the part of all, to those measures of sanitary care which avert or diminish zymotic disease. This applies to measures of personal and private hygiene no less than to more general and public proceedings. Even now, without the presence of any epidemic disease, we lose weekly 293 persons in excess of the average of really healthy districts of England. The Registrar-general attributes this weekly sacrifice to the fatal influence of bad air, due to ill-ventilation, to badly-constructed cesspools, closets, and drains. and the evaporation of somewhat more than four million gallons of water from the Thames, carrying with the vapour, and diffusing over all the town, impurities which are breathed by the whole population. This average waste of life calls loudly for sanitary improvements; but we are already over the average. The hot and stagnant autumn months are before us. The cholera has broken out at St. Petersburgh. Paris just now is suffering greatly from typhus, scarlet fever, and small-pox. Therefore, although unwilling to play the part of alarmists, we say to all, "take care." Guardians of the public health we bid to be watchful: and we would have all possible precautions taken by each individual to avert any zymotic affection:

DEATHS IN INDIA.

OUR soldiers in India are suffering dreadfully from the heat. It is more murderous than the sword of the enemy. The cost of life of a hot-weather campaign is frightful; apoplexy kills off the men in masses. *The Times'* correspondent sends the following "accurate list of the deaths in her Majesty's 35th Regiment," in the defeat at Arrah in April:—Officers: killed 1; died from apoplexy, 2. Men: killed, 8; wounded, (but died from apoplexy), 10; died from apoplexy, 84. Total, 102 men, and 3 officers. Again, we hear that in General Rose's attack on the enemy at Kooneh, 8 men fell dead in the ranks, and upwards of 20 officers and men had to be carried from the field through the heat of the sun; and 19 of our casualties at Bareilly, 10 of which were fatal, were caused in the same way. The men so seized are described by Mr. Russell as becoming purple in the face, the breathing is stertorous, and the eyes are fixed and staring. Venesection and local abstraction of blood are of little avail. Few recover; and yet fewer are again fit for active service, except after long rest.

Phœbus wages dire war upon us; he makes common cause with the gods of the Hindoo mythology; and, seated in the clouds, slays half an army with his solar shafts, as when Hector battled and when Homer sang. No doubt, the sad exigencies of the guerilla warfare now carried on in India lead inevitably to much of this waste of life; but this terrible mortality is partly due to the neglect of suitable clothing, and calico head-dress? The dark-green dress of the Rifles, and the murderous head-dress of the Highlanders, are so many "traps to catch a sunbeam." These poor fellows fall victims to the defective supply of simple necessities. To attempt a long march under an Indian sun so clad is little less than suicide. A forced march is a fore-known sacrifice.

THE ATHANASIAN MIRACLE OF SPEECH.

THERE is a well-known passage in Gibbon's famous History relating to the "miracle" worked in behalf of the Athanasian confessors, who were able to speak as well as they had done previously, after their tongues had been cut off or torn out by the roots. The evidences on this point are collected and published in Ruinart's edition of the "History of the Vandal Persecution," written by Victor Vitensis, a contemporary African bishop. Gibbon ends his account thus:—"The supernatural gift of the African confessors, who spoke without tongues, will command the assent of those, and those only, who already believe that their language was pure and orthodox. "But the stubborn mind of the infidel is guarded by secret, incurable suspicion; and the Arian or Socinian, who has rejected the doctrine of the Trinity, will not be shaken by the most plausible evidence of an Athanasian miracle." Other writers have been less sceptical; and Dr. Newman, in his "Essay on Miracles," recorded in the "Ecclesiastical History of Early Ages," (Oxford, 1843,) labours strenuously to assert the truth, and demonstrate the significance of this phenomenon, which he assumes to be miraculous. The latest and most erudite of the editors of Gibbon, Dr. William Smith, declared that he had fully satisfied himself of the authenticity of the relation. Thus the question remained a doubtful subject of discussion differently handled by two parties: one of whom accepted the evidences that they might proclaim the miracle; while the other were inclined to discredit the testimony, lest they should be forced into an involuntary belief of confession of faith. The fact is, that the evidence is trustworthy, and the phenomena credible, but the event savours in no way of the miraculous. Surgeons know well that the tongue is but *one* of the organs of articulate speech, which is further modified by the palate, the teeth, the cheeks, and the lips. Mutilation of the tongue involves only a loss of utterance of lingual sounds, leaving the labial, the dental, and the guttural sounds unaffected. Moreover, it is more than probable that only a small portion of the tongue was cut off in these operations. Milman, in his "History of Christianity," has collected interesting contemporary evidence as to the process of abscision of the tongue in Persia and Syria, where this punishment still prevails. The personal evidence of Colonel Churchill, Sir John Malcolm, and Sir John Macneill, has lately thrown an interesting light upon the subject. The tongue is drawn forcibly out of the mouth in these countries by means of a strong steel hook, and with a sharp razor it is cut off at the line of the teeth. The united testimony of these competent observers certifies that a considerable power of speech is attained after the wound has cicatrized. Thus in the instance of some rebellious Druse chieftains who suffered the punishment, Colonel Churchill informs us that they afterwards spoke with tolerable fluency. Such excisions of the tongue are occasionally practised in cases of disease, and the experience of modern surgeons fully confirms this statement. Finally, to obtain an assurance of the acceptance of these facts by surgical and physiological authorities, Sir Benjamin Brodie has been consulted as to the authenticity of the various relations, and he has not only endorsed the statements by expressing his belief in the accuracy of the description, but has taken pains to explain that the tongue might easily, in the natural process of healing, acquire elongation; since, by virtue of the law of contraction of cicatrices, the transverse cicatrix would gradually diminish, and by the strain upon the border would approximate these, which would finally result in antero-posterior elongation of the remaining portion of the organ.

NATIONAL MEDICAL COURTESIES.

The need which ties friendship is never more sorely felt than in sickness. The Samaritan virtue lives now in as bright esteem and holy honour as in the past. Help to the sick was never yet denied by a true Englishman—though his bitter enemy were the claimant. Strangers become friends when disease makes them helpless. Such kindly principle actuated our countrymen at Jamaica when the United States' frigate, *Susquehannah*, put in with a crew disabled by yellow fever. Not only was such prompt aid afforded as humanity demanded, but all that kindliness could further suggest. The medical officer of the island, Mr. Smith, went on board in charge of the sick, having volunteered to face the contagion, and to do battle against the fever. His incessant care and skill, and the service he rendered, evoked from the crew and captain the earnest expression of their gratitude. The Medical Association of America tendered to him the cordial thanks and approbation of the profession of that country. The Government of the United States have, we believe, presented him with a testimony of their thanks. The most gratifying courtesies have in consequence been exchanged between the Governments of Great Britain and America; and Lord Napier has been enabled by this act and the consequences to exchange public and emphatic assurances of international good-will, which, just at this moment, are peculiarly gratifying and important. The occasion has fittingly suggested to both sides an expression of the earnest desire for the continuance of harmony and mutual confidence; and it has tended, more than anything else, to restore the friendly *rapport* between the two navies which recent events had disturbed.

Reviews and Notices of Books.

The Principles and Practice of Obstetrics. By Henry Miller, M.D., Professor of Obstetric Medicine in the University of Louisville. Philadelphia; Blanchard and Lea. 1858.

A publication, entitled "A Theoretical and Practical Treatise on Human Parturition," issued by Dr. Miller several years ago, may be called the first edition of the work now before us.

It is a natural desire, one honourable to the professor, for his pupils to possess a compendious exposition of his views. It is also, perhaps, creditable to the professor that he should seek to gratify this desire. It may be that, beyond this academical circle, no particular anxiety is felt for a new systematic treatise on midwifery. In seeking for a more extended audience, a professor ought to weigh with himself—first, whether he have any new doctrines or corrections of old ones to propound that are calculated to modify the received physiology and practice; secondly, whether, believing himself to be the depository of such doctrines, these might not more properly be submitted to the profession in the form of monographs. It is rather hard to be compelled to buy and rummage a big book, for the sake of extracting one or two ideas that might have formed the topic of a paper in a medical periodical. It is doubtful whether a professor does himself justice by such a mode of framing and exhibiting his productions. The scientific practitioner, whose good opinion is alone capable of adding to the sound reputation of an author, is not likely to be tempted to peruse a book adapted for a text-book for the tyro. And, again, new doctrines, which have not stood the test of scientific criticism—which have not gone through the alembic of other men's experience—ought not to be elevated to the rank of standard rules, and inculcated in a student's guide-book, to the exclusion or depreciation of recognised principles of practice. It is worthy of remark, that some of the most philosophical and experienced of our modern obstetricians have not been solicitous to publish dogmatic treatises on systems of midwifery, but have rather sought to improve their art by the more modest and more difficult method of investigating and illustrating some important topic in a monograph.

Admitting that there is some considerable ability displayed in parts of Dr. Miller's book, we cannot, on the principles just stated, approve it as a guide for students and junior practitioners. The directions in matters of practice are often the result of views that are by no means established as trustworthy. In many parts the book is far too controversial. From a study of these parts the pupil may perhaps conceive a high idea of the author's acuteness as a pleader; but in exact proportion as this feeling arises in his mind, we would caution him not to expect those greater qualities of candid inquiry and sober judgment which fit a man to be a teacher. As for those parts which are not open to the objection just stated—those, namely, in which well-established truths are expounded,—we cannot see that there was any particular necessity for their reproduction. In his Preface, Dr. Miller says:—

> "I have made heavy draughts from the work of Professor Paul Antoine Dubois. . . . Indeed I have not scrupled frequently to translate his very words, as well as to adopt many of his ideas, without the special acknowledgement indicated by quotation points, which would have had an *unseemly appearance!*"

Honesty, poorly clad, is better than brilliant pretence, Professor Miller! The excellent Parisian Professor is as liberal as he is rich. He is at all times ready to lend from his scientific treasury without interest. But he may object to such barefaced appropriation as is implied in these "heavy draughts."

Passing by the elementary parts of the work, we will notice those points to which the Professor invites special attention. He enters at length upon the subjects, Abortion, "Flooding," and Inflammatory Diseases of the Uterine Neck. His experience generally bears out the views of Dr. Henry Bennet as to inflammation of the cervix uteri. He treats the subject at considerable length and with great controversial acuteness.

In the chapter on Flooding, the author follows the views, and recommends the practice, of Puzos. He condemns the resort to turning in any case. He says, indeed, that "he has never met with an instance of unavoidable flooding, in which he deemed it imperatively necessary to deliver by turning." He thus objects to the total artificial detachment of the placenta:—

> "True, the hæmorrhage may be arrested; but what assurance can we have that labour will promptly supervene? And, meanwhile, the detached placenta, divested, of course, of vitality, immersed in fluids, and exposed to both heat and air, must take on putrefaction and decomposition, and, poisoning the blood of the mother, excite constitutional irritation, which she is ill able to bear in her exhausted condition. I conclude, therefore, that it must of necessity be supplemented, if need be, by the extraction of the child, and, consequently, that it cannot be accounted an adequate substitute for artificial delivery."

The first objection, based on the liability of putrefaction of the placenta, although not without its weight, is, we think, exaggerated. The second, that it does not supersede the forced delivery, is now generally felt, and has been acknowledged by the most enthusiastic advocates of the method.

The substitute for turning which Dr. Miller proposes, is a modification of the method of Puzos, and consists in originating expulsive contraction of the uterus by the tampon or plug, and then puncturing the membranes, relying on the tampon to control the flooding until the liquor amnii is evacuated. "This," continues the author, "is the only method of treatment of which I have any experience, and I have employed it with uniform success, so far as the mother is concerned. This is strong testimony, but it must be mollified by the confession that my experience in placenta prævia cases has not been large." There can be no doubt that in the majority of cases the treatment indicated is amply sufficient; but it is equally certain that cases do and will arise in which something more is required. That Dr. Miller's experience has been limited to the first class of cases, is therefore no argument for the exclusion of more energetic modes of treatment. The operation of turning will, no doubt, be resorted to less frequently than heretofore. The physiological and therapeutical analysis of Placenta Prævia, published by Dr. Barnes, must lead to a more accurate estimation of the conditions which favour the arrest of hæmorrhage, and will inspire more confidence in the resources of Nature, aided by further proceedings, than turning. But the ultimate resource in many extreme cases will still be turning. It is not judicious teaching to dogmatize too much in this question. The responsibility is great which a professor, whose "experience has not been large," undertakes, when he tells his pupils to discard a remedial measure that other men have found essential to safety.

We regret to have felt ourselves obliged to temper our appreciation of the acuteness and ability displayed in the compilation and composition of the work of our American cousin, with so many expressions of caution. We should be delighted to receive instruction from him on those topics upon which his experience and reflection have more especially led him to form independent opinions. But we must again urge that new opinions which aim at the modification or subversion of recognized principles, cannot, unless demonstrated by ample evidence, find an appropriate place in elementary works addressed *ex cathedrâ*, to students and junior practitioners.

Experiences of a Civilian in Eastern Military Hospitals: with Observations on the English, French, and other Medical Departments, and the Organization of Military Schools and Hospitals. By PETER PINCOFFS M.D., &c., &c. London: Williams and Norgate.

THIS is a valuable, well-written book upon a subject of undying interest. The Russian war served to bring out into disgraceful prominence the deficiences of our hospital arrangements, whilst at the same time it brought us into close contact with another great military power whose medical service has generally been regarded as a model for the rest of Europe. Dr. Pincoffs, a man of large experience and highly-cultivated mind, was civil physician in the Scutari hospitals; and he here gives us, in a very pleasant and readable narrative, the results of his observation, together with important suggestions for the amendment of our own military medical service.

The author is a civilian, and from the unfortunate antagonism existing between the civil medical service and the military surgeons and physicians proper, his statements, may, perhaps, in some quarters, be read with suspicion; but we think that his book can hardly fail to furnish all who are not blinded by professional prejudices, with a number of extremely valuable suggestions.

Dr. Pincoffs appears to be thoroughly conversant with the French and some of the other continental systems; and the portion of his work that will excite the liveliest interest is where he draws a comparison between our own hospital arrangements and those of our own neighbours nearest the channel. He considers it desirable, amongst other things, that we should imitate them in establishing a division between the surgical and medical cases. "The entire field of medical science," he truly observes, "is so extensive, and the two branches require, as it were, a different bent of mind; so that it is but seldom that a distinguished surgeon is at the same time a good physician." We have some tables given to show the comparative grades of promotion and remuneration in the medical services of England, France, Austria, Prussia, and Holland, that merit, and, we hope, will receive careful consideration; the more so as we know not, save in the present work, where we could look for trustworthy information on this important subject. Although Dr. Pincoffs has pointed out with unsparing fidelity the faults of our military medical service—although he has stated that the condition of the British army, in the first winter of the campaign, was more deplorable than even the "*Times*' Correspondent" represented it to be, yet he cheerfully admits that such a reformation was at length effected as to present a state of things unexampled, perhaps, in the history of war—that of our army, in the second year of a campaign, being almost exempt from disease.

A Manual of Photographic Manipulation, treating of the Practice of the Art, and its various Applications to Nature. By Lake Price. Foolscap 8vo, pp. 256. London: Churchill.

The author has long been favourably known as a practical photographist, and has endeavoured in this publication to condense into the shortest space, and in the most simple form, the information which he has to offer to the reader. If he occasionally appears to be too minute in his descriptions of the various manipulations, he justifies the proceeding on the ground of the great importance of attending to minutiæ in the practice of an art, the successful pursuit of which depends upon strict attention to detail. Mr. Price has succeeded admirably in simplifying the whole process of photography, and his book will be a boon to all students in that process. The Manual is profusely illustrated with engravings, which in a marked manner facilitate the reader's appreciation of the views of the author.

A Clinical Memoir on Strangulated Hernia. By G. Macilwain. London. Renshaw.

The author of this little work is already well and favourably known to the profession by his writings; and though he now brings before it nothing which can lay claim to novelty, he has, nevertheless, done justice to the subject he treats, by setting forth, in concise and forcible language, some of those more salient features in regard to the pathology and treatment of hernia, which cannot be too frequently and strongly impressed on the mind of the surgeon.

Mr. Macilwain makes some most judicious observations on the employment of the taxis, and, towards their conclusion, remarks:

"In discussing some other measures employed in strangulated hernia, I would say, whatever measures you select, let them be few—I had almost said the fewer the better. Delay, beyond that which is guided by a sound discretion, has been too often defeat. In serious cases like these, it is difficult to conceal the impatience that a practical man, who has a clear and definite object, feels at the solemn trifling he may have been obliged to witness."

A strong protest is entered against the practice of bleeding, and the administration of antimony in these cases; and on the subject of the old plan of giving aperients and purgatives after the operation, the author has much to say. He claims for himself the merit of having been the first to publicly denounce their admissibility; and, while reprobating the plan of treatment, as advocated in the writings of Travers, Lawrence, and others, he accords a just share of praise to the elder Taunton, whose success in hernial cases was in no small degree due to the non-pursuit of this baneful practice. The sounder pathology of the present day has slowly but certainly admitted the justice of the author's view, and the indications of treatment being now more perfectly understood, the plan of purgation is justly ignored by the best surgeons.

On the employment of tobacco and chloroform, the remarks are few. The former "is never to be employed in old people, nor when we are called in late to a case, nor where any circumstances have produced an appearance of more than usual exhaustion." Of the latter agent the author has "had no experience;" he nevertheless offers opinions adverse to its employment, and thinks it might hence be judiciously omitted. "The author's practice" next receives attention, and may be regarded as a *résumé* of the foregone observations, with the incorporation of some well-selected cases. The concluding chapter is on "Constipation of the Bowels from mechanical obstruction, or inaction from other causes," and is well worthy of perusal.

Altogether, Mr. Macilwain has strung together a series of observations which will help to maintain the high character which his previous writings have obtained for him.

The Cyclopædia of Anatomy and Physiology. Edited by Robert B. Todd, M.R.S., &c. Paris XLIX. and L. London: Longmans.

This able work is at length close to completion, as part LI., concluding it, and containing title, introduction, index, &c., to the supplementary volume, a classified table of contents, and a copious index to the whole work, will, we are assured, be published immediately. The portion before us contains the conclusion of the article "Ruminantia," by Dr. Spencer Cobbold, and an elaborate and copiously-illustrated dissertation upon the "Uterus and its Appendages, by Dr. Arthur Farre. To again bestow praise upon the "Cyclopædia of Anatomy and Physiology" would be merely supererogation.

Treatise on the Principles and Practice of Veterinary Medicine and Surgery. By WILLIAM HAYCOCK, Veterinary Surgeon and M.R.C.V.S. Part I. pp. 160. London: Churchill, 1858.

ON reading Mr. Haycock's "Preface" we paused at, and read the following words:

> "......We are on the eve of a complete change. The hold which homœopathy has taken of the public mind; the remedial power of cold and tepid water, when skilfully applied to the organism for the cure both of acute and chronic disease, as well as the fact that the most eminent professors of the healing art not only abandon what is called outhodox practice, but openly avow their heresy and disgust at the same, is sufficiently indicative of what will sooner or later ensue."—p. vi.

But even supposing all this rubbishing rhodomontade were true, what, thought we, has it to do with veterinary practice? Is there homœopathy amongst the horses? At page 61 we became further enlightened, as the author there informs us that

> "The most important matter for the veterinary surgeon to fully comprehend—assuming that he understands the nature of the malady he may be called upon to treat—is a knowledge of the Law of Healing, that law being expressed as follows:—
>
> "Diseases are cured by such medicines as have the power of producing in healthy animals symptoms similar to those which characterize the diseases themselves.
>
> "We have on a former occasion explained this law, (see Introduction to the author's 'Elements of Veterinary Homœopathy.') Perhaps a closer explanation may be necessary on the present occasion."—p. 61.

Is it really the fact, then, that as that miserable delusion of globulism is becoming dislodged from its human habitation, it is seeking to fix itself amongst the lower animals? We wish it a speedy progress through the descending scale of living beings until it arrives at the blind sirens of the dark caves of Carniola, with whom, in all probability, it will feel itself most secure and at home.

Foreign Department.

Extra-Uterine Gestation of six years' duration; Gastrotomy; Recovery.

IN a late number of the *Gazette Médicale de Paris* (May 29th, 1858), we find the above case extracted from *L' Union Médicale de la Gironde*, and published by Dr. Chevillon. The patient had had two children, at twenty-three and twenty-five years of age, and had been delivered at the Paris Maternity. She married at thirty-two, and became pregnant four years afterwards, in 1841. In the second month of this pregnancy, she was struck a blow on the side, and immediately experienced great pain. The next day, she was unable to get up, and complained of great suffering in the hypogastrium, with constant desire to pass urine. When she attempted to rise, she could not stand, and was obliged to bend almost in two. She was carefully treated for these symptoms by Messrs. Valentin and Martin. When four months and a half of gestation had been completed, she distinctly felt the movements of the fœtus, and when the nine months were over, (July, 1844,) the patient was taken with the pains of labour. These lasted a week, without result, so that the midwife formed the opinion that no pregnancy existed, and that there would be no parturition. The patient was therefore left, although she distinctly maintained that she was pregnant, and that she felt her child. This state of things lasted another week, (no medical man was called in,) after which all symptoms of parturition disappeared, but the movements of the fœtus lasted for the next two months. Severe pain, however, continued in the right iliac fossa, which induced the patient to think an abscess was forming in that locality. Her general health, however, gradually improved, she began to menstruate again in January, 1847, and did so until March of the same year, when the catamenial flow stopped after a fright caused by a fire.

From this time, the patient's sufferings re-commenced; she began to waste away, and used to say that her child was decomposing within her. She was admitted into the hospital of Vitry le Français, in July, 1847, with hectic fever, subject to exacerbations, diarrhœa, and wasting. On the right side of the abdomen, a large tumour was felt, which reached from the umbilical region to Pompart's ligament. It was not supposed that a fœtus was lodged within the tumour; at all events she refused to allow an examination per vaginam or per anum, and left the hospital.

She returned in November, 1847, and this time an abscess which had formed in the right iliac fossa broke spontaneously. The patient again left on December 20th, and underwent no kind of treatment until the 1st of February of the following year, when she applied to M. Chevillon. The latter ascertained the existence of a fœtus in the abdominal tumour, from which latter fœtid pus was issuing, a fœtal bone (the scapula) resting on the deep margins of the aperture. There was severe diarrhœa, and the dejections were very offensive, being composed of a puriform fluid, with putrefying *débris*. It was plain that the tumour had perforated both the intestine and the abdominal parieties.

As the patient was wasting away, the diarrhœa being very severe, and as she might soon be carried off by the putrid absorption going on, no reliance could be placed on the efforts of nature. M. Chevillon therefore proceeded to operate on the 3rd of February, assisted by M. Lévêque.

The opening was enlarged above and below, and the disjointed bones of the child, floating in a putrefying fluid, were gradually removed. The author states that the pouch was very capacious, with thick, hard parietes, and occupied the whole of the right iliac fossa, the womb and bladder being pushed to the left side. The point of communication between the pouch and the intestine could not be found. The former was injected with detergent fluids, and the patient supported with wine. The bones belonged to a full-grown fœtus.

The diarrhœa diminished gradually, the patient recovered a little strength, the wound contracted, and suppuration became less abundant and assumed a better character; but fæcal matter continued to pass through the fistulous opening in the abdomen. The aperture was reduced, by the month of April, to the diameter of a quill; but the intestinal fluid still oozed through it up to the month of May, when the wound finally closed. The cicatrix was forcibly torn open in August, in consequence of a great physical effort made by the patient; the wound had, however, again healed up completely by the 20th of November. The patient has not again menstruated; but her health has remained extremely good.

ON DIPHTHERITIC AFFECTIONS, AND ON THE MALIGNANT ANGINA OBSERVED IN PARIS IN 1855.

By M. ISAMBERT.

THE *Archives de Médecine* has published this important paper; and as we have lately been visited by an epidemic of the same kind, we transcribe the final propositions of the author, to be used as a term of comparison with the visitation in London.

Diphtheritic affections sometimes appear sporadically; they often seem to be endemic, and also epidemic and contagious. Epidemic influences are often the principal causes. Contagion does, however, really exist, as several medical men have been infected.

Shall we agree with M. Bretonneau, and believe that diphtheritis is not propagated by the air, but is always the result of a kind of inoculation or actual contact of the morbid secretion with a mucous membrane? The author thinks this opinion too exclusive, as also does M. Trousseau.

Diphtheritic affections are generally preceded by initiatory symptoms in the form of bronchitis, with more or less fever. The general aspect of these affections, at an advanced period, is of the adynamic kind, except when there is much agitation and convulsive effort brought on by croupy exudation.

These ailments are of a decidedly specific nature; the more they are studied, the more one remains convinced that inflammation is of secondary importance, and is sometimes completely absent.

Relapses are not rare in diphtheritis; this complaint therein differs from other specific diseases; as variola, rubeola, and scarlatina.

The general treatment should be directed against the inflammation, if it be present, which circumstance is, however, rare. Abstraction of blood should be used cautiously in an affection which so soon takes a typhoid character. Cutaneous counter-irritation should be completely avoided, as the irritated regions soon become centres of new diphtheritic manifestations. Emetics are extremely valuable; and alteratives, mercury, alkaline carbonates, and chlorate of potash, are often useful.

Local treatment is very important, and consists of an energetic modification of the affected surfaces. Calomel, alum, hydrochloric acid, and especially solutions of nitrate of silver, are always indicated.

The patient should, finally, be well sustained, besides taking medicines, as there is a tendency to a typhoid state in this kind of affection. He should also be given tonics, as bark, coffee, and wine; the latter tonic is especially adviseable during convalescence after severe diphtheritis.

THE

MEDICAL PRACTITIONERS BILL,

TO BE INTITULED,

AN ACT TO REGULATE THE QUALIFICATIONS OF PRACTITIONERS IN MEDICINE AND SURGERY.

[THE following is a copy of the Bill, as it passed the Houses of Lords and Commons, and now (Thursday, July 29th) only requires the Royal Assent to make it an ACT OF PARLIAMENT:—]

WHEREAS it is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners: Be it therefore enacted by the Queen's most excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

I. *Short title.*—This Act may for all purposes be cited as "The Medical Act."

II. *Commencement of Act.*—This Act shall commence and take effect from the 1st day of October, 1858.

III. *Medical Council.*—A Council, which shall be styled "The General Council of Medical Education and Registration of the United Kingdom," hereinafter referred to as the General Council, shall be established, and branch Councils for England, Scotland, and Ireland respectively formed thereout as hereinafter mentioned.

IV *Members of Council.*—The General Council shall consist of one person chosen from time to time by each of the following bodies—that is to say, the Royal College of Physicians, the Royal College of Surgeons of England, the Apothecaries' Society of London, the University of Oxford, the University of Cambridge, the University of Durham, the University of London, the College of Physicians of Edinburgh, the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow. One person chosen from time to time by the University of Edinburgh and the two Universities of Aberdeen collectively One person chosen from time to time by the University of Glasgow and the University of St. Andrews collectively. One person chosen from time to time by each of the following bodies:—The King and Queen's College of Physicians in Ireland, the Royal College of Surgeons in Ireland, the Apothecaries' Hall of Ireland, the University of Dublin, the Queen's University in Ireland; and six persons to be nominated by Her Majesty, with the advice of Her Privy Council, four of whom shall be appointed for England, one for Scotland, and one for Ireland; and of a President, to be elected by the General Council.

V. *Providing for Appointment, if Universities of Glasgow, Aberdeen, and St. Andrews disagree.*—If the said Universities of Edinburgh and Aberdeen, of Glargow and St. Andrews respectively, shall not be able to agree upon some one person to represent them in the Council, it thall be lawful for each one of the said Universities to select one person; and thereupon it shall be lawful for her Majesty, with the advice of her Privy Council, to appoint one of the persons so selected to be a member of the said Council for the said Universities.

VI. *Branches of the Council for England, Scotland, and Ireland.*—The members chosen by the Medical Corporations and Universities of England, Scotland, and Ireland respectively, and the members nominated by her Majesty, with the advice of her Privy Council, for such parts respectively of the United Kingdom, shall be the branch Councils for such parts respectively of the United Kingdom, to which branch Councils shall be delegated such of the powers and duties vested in the Council, as the Council may see fit other than the power to make representations to her Majesty in Council as hereinafter mentioned. The President shall be a member of all the branch Councils.

VII. *Qualification.*—Members of the General Council representing the Medical Corporations must be qualified to be registered under this Act.

VIII. *Resignation or death of member of General Council.*—The members of the General Council shall be chosen and nominated for a term not exceeding five years, and shall be capable of reappointment, and any member may at any time resign his appointment by letter addressed to the President of the said Counsel, and upon the death or resignation of any member of the said Council, some other person shall be constituted a member of the said Council in his place in manner hereinbefore provided; but it shall be lawful for the Council during such vacancy to exercise the powers hereinafter mentioned.

IX. *Time and place of meeting of the General Council.*—The General Council shall hold their first meeting within three months from the commencement of this Act, in such place and at such time as one of her Majesty's principal Secretaries of State shall appoint, and shall make such rules and regulations as to the times and places of the meetings of the General Council and the mode summoning the same, a sto them shall seem expedient, which rules and regulations shall remain in force until altered at any subsequent meeting; and in the absence of any rule or regulation as to the summoning a meeting of the General Council, it shall be lawful for the President to summon a meeting at such time and place as to him shall seem expedient, by letter addressed to each member; and at every meeting, in the absence of the President, some other member to be chosen from the members present shall act as President; and all Acts of the General Council shall be decided by the votes of the majority of the members present at any meeting, the whole number present not being less than eight, and at all such meetings the President for the time being shall in addition to his vote as a member of the Council, have a casting vote, in case of an equality of votes; and the General Council shall have power to appoint an executive committee out of their own body, of which the quorum shall not be less than three, and to delegate to such committee such of the powers and duties vested in the Council as the Council may see fit, other than the power of making representations to her Majesty in Council as hereinafter mentioned.

X. *Appointment of registrars and other officers.*—The General Council shall appoint a registrar, who shall act as secretary of the General Council, and who may also act as treasurer, unless the Council shall appoint another person or other persons as treasurer or treasurers; and the person or persons so appointed shall likewise act as registrar for England, and as secretary and treasurer or treasurers, as the case may be, for the branch Council for England; the General Council and branch Council for England shall also appoint so many clerks and servants as shall be necessary for the purposes of this Act: and every person so appointed by any Council shall be removable at the pleasure of that Council, and shall be paid such salary as the Council by which he was appointed shall think fit.

XI. *Appointment of registrars and other officers by branch Councils.*—The branch Councils for Scotland and Ireland shall each respectively in like manner appoint a registrar and other officers and clerks, who shall be paid such salaries as such branch Councils respectively shall think fit, and be removable at the pleasure of the Council by which they were appointed; and the person appointed registrar shall also act as secretary to the branch Council, and may also act as treasurer, unless the Council shall appoint some other person or persons as treasurer or treasurers.

XII. *Fees for attendance at Councils.*—There shall be paid to the members of the Councils such fees for attendance, and such reasonable travelling expenses, as shall from time to time be allowed by the General Council, and approved by the Commissioners of her Majesty's Treasury.

XIII. *Expenses of the Councils.*—All moneys payable to the respective Councils shall be paid to the treasurers of such Councils respectively, and shall be applied to defray the expenses of carrying this Act into execution in manner following:—that is to say, separate accounts shall be kept of the expenses of the General Council, and of those of the branch Councils; and the expenses of the General Council, including those of keeping, printing, and publishing the Register for the United Kingdom, shall be defrayed, under the direction of the General Council, by means of an equal per-centage rate upon all moneys received by the several branch Councils; returns shall be made by the treasurers of the respective branch Councils, at such times as the General Council shall direct, of all moneys received by them; and the necessary per-centage having been computed by the General Council, the respective contributions shall be paid by the treasurers of such branch Councils to the treasurer or treasurers of the General Council; and the expenses of the branch Councils shall be defrayed, under the direction of those Councils respectively, out of the residue of the moneys so received as aforesaid.

XIV. *Duty of registrar to keep the register correct.*—It shall be the duty of the registrars to keep their respective registers correct in accordance with the provisions of this Act, and the orders and regulations of the General Council, and to erase the names of all registered persons who shall have died, and shall from time to time make the necessary alterations in the addresses or qualifications of the persons registered under this Act; and to enable the respective registrars duly to fulfil the duties imposed upon them, it shall be lawful for the registrar to write a letter to any registered person, addressed to him according to his address on the register, to inquire whether he has ceased to practise, or has changed his residence, and if no answer shall be returned to such letter within the period of six months from the sending of such letter it shall be lawful to erase the name of such person from the register; provided always, that the same may be restored by direction of the Council should they think fit to make an order to that effect.

XV. *Registration of persons now qualified, and persons hereafter qualified.*—Every person now possessed, and (subject to the provisions herein-after contained) every person hereafter becoming possessed, of any one or more of the qualifications described in the Schedule (A) to this Act, shall, on the payment of a fee, not exceeding £2, in respect to qualifications obtained before the 1st day of January, 1859, and not exceeding £5 in respect to qualifications obtained on or after that date, be entitled to be registered on producing to the registrar of the branch Council for England, Scotland, or Ireland, the document conferring or evidencing the qualification or each of the qualifications in respect whereof he seeks to be so registered, or upon transmitting by post to such registrar information of his name and address, and evidence of the qualification or qualifications in respect whereof he seeks to be registered, and of the time or times at which the same was or were respectively obtained: provided always, that it shall be lawful for the several colleges and other bodies mentioned in the said Schedule (A) to transmit from time to time to the said registrar lists certified under their respective seals of the several persons who, in respect of qualifications granted by such colleges and bodies respectively, are for the time being entitled to be registered under this Act, stating the respective qualifications and places of residence of such persons; and it shall be lawful for the registrar thereupon, and upon payment of such fee as aforesaid in respect of each person to be registered, to enter in the register the persons mentioned in such lists, with their qualifications and places of residence as therein dated, without other application in relation thereto.

XVI. *Regulation of registers.*—The General Council shall, with all convenient speed after the passing of this Act, and from time to time as occasion may require, make orders for regulating the registers to be kept under this Act, as nearly as conveniently may be in accordance with the Form set forth in Schedule (D) to this Act, or to the like effect.

XVII. *Persons practising in England before August 1st*, 1815, *entitled to be registered.*—Any person who was actually practising medicine in England before the 1st day of August, 1815, shall, on payment of a fee to be fixed by the General Council, be entitled to be registered on producing to the registrar of the branch Council for England, Scotland, or Ireland, a declaration according to the Form in Schedule (B) to this Act, signed by him, or upon transmitting to such registrar information of his name and address, and enclosing such declaration as aforesaid.

XVIII. *Council may require information as to course of study, &c., required for obtaining qualifications.*—The several colleges and bodies in the United Kingdom mentioned in Schedule (A) to this Act, shall from time to time, when required by the General Council, furnish such Council with such information as they may require as to the courses of study and examinations to be gone through in order to obtain the respective qualifications mentioned in Schedule (A) to this Act, and the ages at which such courses of study and examination are required to be gone through, and such qualifications are conferred, and generally as to the requisites for obtaining such qualifications; and any member or members of the General Council, or any person or persons deputed for this purpose by such Council, or by any branch Council, may attend and be present at any such examinations.

XIX. *Colleges may unite in conducting examinations.*—Any two or more of the colleges and bodies in the United Kingdom mentioned in Schedule (A) to this Act, may, with the sanction and under the direction of the General Council, unite or co-operate in conducting the examinations required for qualifications to be registered under this Act.

XX. *Defects in the course of study or examinations may be represented by the General Council to her Majesty's Privy Council.*—In case it appear to the General Council that the course of study and examinations to be gone through in order to obtain any such qualification from any such college or body are not such as to secure the possession by persons obtaining such qualification of the requisite knowledge and skill for the efficient practice of their profession, it shall be lawful for such General Council to represent the same to her Majesty's most honourable Privy Council.

XXI. *Privy Council may, by order, suspend the right of registration in respect of qualifications granted by college or body in default. Provision for revocation.*—It shall be lawful for the Privy Council, upon any such representation as aforesaid, if it see fit, to order that any qualification granted by such college or body, after such time as may be mentioned in the order, shall not confer any right to be registered under this Act: provided always, that it shall be lawful for her Majesty, with the advice of her Privy Council, when it is made to appear to her, upon further representation from the General Council or otherwise, that such college or body has made effectual provision, to the satisfaction of such General Council, for the improvement of such course of study or examinations, or the mode of conducting such examinations, to revoke any such order.

XXII. *Persons not to be registered in respect of qualifications granted by the college or body before the revocation of the order.*—After the time mentioned in this behalf in any such order in Council no person shall be entitled to be registered under this Act in respect of any such qualification as in such order mentioned, granted by the college or body to which such order relates, after the time therein mentioned, and the revocation of any such order shall not entitle any person to be registered in respect of any qualification granted before such revocation.

XXIII. *Making an authentication of orders, &c.*—All powers vested in the Privy Council by this Act may be exercised by any three or more of the lords and others of the Privy Council, the vice-president of the committee of the said Privy Council on Education being one of them; and all orders and acts of the Privy Council under this Act shall be sufficiently made and signified by a written or printed document, signed by one of the clerks of the Privy Council, or such officer as may be appointed by the Privy Council in this behalf: and all orders and acts made or signified by any written or printed document purporting to be so signed shall be deemed to have been duly made, issued, and done by the Privy Council; and every such document shall be received in evidence in all courts, and before all justices and others, without proof of the authority or signature of such clerk or other officer or other proof whatsoever, until it be shown that such document was not duly signed by the authority of the Privy Council.

XXIV. *As to registration by branch registrars.*—Where any person entitled to be registered under this Act applies to the registrar of any of the said branch Councils for that purpose, such registrar shall forthwith enter in a local register in the form set forth in Schedule (1) to this Act, or to the like effect, to be kept by him for that purpose, the name and place of residence, and the qualification or several qualifications in respect of which the person is so entitled, and the date of the registration, and shall, in the case of the registrar of the Branch Council for Scotland or Ireland, with all convenient speed sent to the registrar of the General Council a copy, certified under the hand of the registrar, of the entry so made, and the registrar of the General Council shall forthwith cause the same to be entered in the general register; and such registrar shall also forthwith cause all entries made in the local register for England to be entered in the general register; and the entry on the general register shall bear date from the local register.

XXV. *Evidences of qualification to be given before registration.*—No qualification shall be entered on the register, either on the first registration or by way of addition to a registered name, unless the registrar be satisfied by the proper evidence that the person claiming is entitled to it; and any appeal from the decision of the registrar may be decided by the General Council, or by the Council for England, Scotland, or Ireland (as the case may be); and any entry which shall be proved to the satisfaction of such General Council or Branch Council to have been fraudulently or incorrectly made may be erased from the register by order in writing of such General Council or Branch Council.

XXVI. *Register to be published.*—The registrar of the General Council shall in every year cause to be printed, published, and sold under the direction of such Council, a correct register of the names in alphabetical order according to the surnames, with the respective residences, in the form set forth in Schedule (D) to this Act, or to the like effect, and medical titles, diplomas, and qualifications conferred by any corporation or university, or by doctorate of the archbishop of Canterbury, with the dates thereof, of all persons appearing on the General register as existing on the 1st day of January in every year; and such register shall be called "The Medical Register;" and a copy of the Medical Register for the time being, purporting to be so printed and published as aforesaid, shall be evidence in all courts and before all justices of the peace and others that the persons therein specified are registered according to the provisions of this Act; and the absence of the name of any person from such copy shall be evidence, until the contrary be made to appear, that such person is not registered according to the provisions of this Act: provided always, that in the case of any person whose name does not appear in such copy, a certified copy, under the hand of the registrar of the General Council or of any branch

Council, of the entry of the name of such person on the general or local register shall be evidence that such person is registered under the provisions of this Act.

XXVII. *Names struck off from list of college or body.*—If any of the said colleges or the said bodies at any time exercise any power they possess by law of striking off from the list of such college or body the name of any one of their members, such college or body shall signify to the General Council the name of the member so struck off; and the General Council may, if they see fit, direct the registrar to erase forthwith from the register the qualification derived from such college or body in respect of which such member was registered, and the registrar shall note the same therein: provided always, that the name of no person shall be erased from the register on the ground of his having adopted any theory of medicine or surgery.

XXVIII. *Medical practitioners convicted of felony may be struck off the register.*—If any registered medical practitioner shall be convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or shall after due inquiry be judged by the General Council to have been guilty of infamous conduct in any professional respect, the General Council may, if they see fit, direct the register to erase the name of such medical practitioner from the register.

XXIX. *Registered persons may have subsequent qualifications inserted in the register.*—Every person registered under this Act who may have obtained any higher degree or any qualification other than the qualification in respect of which he may have been registered, shall be entitled to have such higher degree or additional qualification inserted in the register in substitution for or in addition to the qualification previously registered, on the payment of such fee as the Council may appoint.

XXX. *Privileges of registered persons.*—Every person registered under this Act shall be entitled according to his qualification or qualifications to practise medicine and surgery, as the case may be in any part of her Majesty's dominions, and to demand and recover in any court of law, with full costs of suit, reasonable charges for professional aid, advice, and visits, and the cost of any medicines or other medical or surgical appliances rendered or supplied by him to his patients: provided always that it shall be lawful for any College of Physicians to pass a bye-law to the effect that no one of their fellows or members shall be entitled to sue in manner aforesaid in any court of law, and thereupon such bye-law may be pleaded in bar to any action for the purposes aforesaid commenced by any fellow or member of such college.

XXXI. *None but registered persons to recover charges.*—After the 1st day of January, 1859, no person shall be entitled to recover any charge in any court of law for any medical or surgical advice, attendance, or for the performance of any operation, or for any medicine which he shall have both prescribed or supplied, unless he shall prove upon the trial that he is registered under this Act.

XXXII. *Poor-law medical officers not disqualified if registered within six months of passing of Act.*—Provided also, that no person who on the 1st of October, 1858, shall be acting as medical officer under an order of the Poor law Commissioners or Poor-law Board shall be disqualified to hold such office by reason of his not being registered as herein required, unless he shall have failed to be registered within six months from the passing of this Act.

XXXIII. *Meaning of legally qualified medical practitioner.*—After the 1st day of January, 1859, the word "legally qualified medical practitioner" or "duly qualified medical practitioner," or any words importing a person recognised by law as a medical practitioner or member of the medical profession, when used in any Act of Parliament, shall be construed to mean a person registered under this Act.

XXXIV. *Registered persons exempted from serving on juries, &c.*—Every person who shall be registered under the provisions of this Act shall be exempt, if he shall so desire, from serving on all juries and inquests whatsoever, and from serving all corporate, parochial, ward, hundred, and township offices, and from serving in the militia, and the name of such person shall not be returned in any list of persons liable to serve in the militia, or in any such office as aforesaid.

XXXV. *Unregistered persons not to hold certain appointments.*—After the 1st day of January, 1859, no person shall hold any appointment as a physician, surgeon, or other medical officer either in the military or naval service, or in emigrant or other vessels, or in any hospital, infirmary, dispensary, or lying-in hospital, not supported wholly by voluntary contributions, or in any lunatic asylum, gaol, penitentiary, house of correction, house of industry, parochial or union workhouse, or poorhouse, parish union, or other public establishment, body ,or institution,or to any friendly or other society for affording mutual relief in sickness, infirmity, or old age, or as a medical officer of health, unless he be registered under this Act: provided always, that nothing in this Act contained shall extend to repeal or alter any of the provisions of the Passengers Act, 1855.

XXXVI. *No certificate to be valid unless person signing be registered.*—After the 1st day January, 1859, no certificate required by any Act now in force, or that may hereafter be passed from any physician, surgeon, licentiate in medicine and surgery, or other medical practitioner, shall be valid unless the person signing the same be registered under this Act.

XXXVII. *Wilful falsification of register.*—Any registrar who shall wilfully make, or cause to be made, any falsification in any matters relating to the register, shall be deemed guilty of a misdemeanor in England or Ireland, and in Scotland of a crime or offence punishable by fine or imprisonment, and shall, on conviction thereof, be imprisoned for any term not exceeding twelve months.

XXXVIII. *Penalty for obtaining registration by false representations.*—If any person shall wilfully procure or attempt to procure himself to be registered under this act, by making or producing or causing to be made or produced any false or fraudulent representation or declaration, either verbally or in writing, every such person aiding and assisting him therein, shall be deemed guilty of a misdemeanour in England and Ireland, and in Scotland of a crime or offence punishable by fine or imprisonment, and shall, on conviction thereof, be sentenced to be imprisoned for any term not exceeding twelve months.

XXXIX. *Penalty for falsely pretending to be a registered person.*—Any person who shall wilfully and falsely pretend to be or take or use the name or title of a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner, or apothecary, or any name, title, addition, or description implying that he is registered under this Act, or that he is recognised by law as a physician, or surgeon, or licentiate in medicine and surgery, or a practitioner in medicine, or an apothecary, shall, upon a summary conviction for any such offence, pay a sum not exceeding £20.

XL. *Recovery of penalties.*—Any penalty to which under this Act any person is liable on summary conviction of any offence, may be recovered as follows; that is to say, in England, in manner directed by the Act of the session holden in the eleventh and twelfth years of her Majesty, chapter 43, and in Ireland in manner directed by "the Petty Sessions (Ireland) Act, 1851," or any other Act for the time being in force in England and Ireland respectively for the like purposes; and any such penalty may in Scotland be recovered by the procurator fiscal of the county, or by any other person before the sheriff or two justices, who may proceed in a summary way and grant warrant for bringing the party complained against before him or them, or issue an order requiring such party to appear on a day and at a time and place to be named in such order, and every such order shall be served on the party by delivering to him in person, or by leaving at his usual place of abode, a copy of such order and of the complaint whereupon the same has proceeded, and upon the appearance or default to appear of the party it shall be lawful for the sheriff or justices to proceed to the hearing of the complaint, and upon proof on oath or confession of the offence, the sheriff or justices shall, without any written pleadings or record of evidence, commit the offender, and decern him to pay the penalty named, as well as such expenses as the sheriff or justices shall think fit, and failing payment, shall grant warrant for recovery thereof by poinding and imprisonment, such imprisonment to be for such period as the discretion of the sheriff or justices may direct, not exceeding three calendar months, and to cease on payment of the penalty and expenses

XLI. *Application of penalties.*—Any sum or sums of money arising from conviction and recovery of penalties as aforesaid shall be paid to the treasurer of the General Council.

XLII. *Application of monies received by treasurer.*—All moneys received by any treasurer arising from fees to be paid on registration, from the sale of registers, from penalties, or otherwise, shall be applied for expenses of registration and of the execution of this Act.

XLIII. *Accounts to be published.*—The treasurers of the General and Branch Councils shall enter in books to be kept for that purpose a true account of all sums of money by them received and paid, and such accounts shall be submitted by them to the respective General Council and Branch Councils at such times as the Councils shall require; and the said accounts shall be published annually, and such accounts shall be laid before both Houses in the month of March in every year, if Parliament be sitting, or if Parliament be not sitting, then within one month after the next meeting of Parliament.

XLIV. *Notice of death of medical practitioners to be given by registrars.*—Every registrar of deaths in the United Kingdom, on receiving notice of the death of any medical practitioner, shall forthwith transmit by post to the registrar of the General Council and to the registrar of the Branch Council a certificate under his own hand of such death, with the particulars of time and place of such death, and may charge the cost of such certificate and transmission as an expense of his office; and on the receipt of such certificate the medical registrar shall erase the name of such deceased medical practitioner from the register.

XLV. *Provision for persons practising in the colonies and elsewhere and for students.*—It shall be lawful for the General Council by special orders to dispense with such provisions of this Act, or with such part of any regulations made by its authority, as to them shall seem fit, in favour of persons now practising medicine or surgery in any part of her Majesty's dominions other than Great Britain and Ireland, by virtue of any of the qualifications described in Schedule (A); and also in favour of persons practising medicine or surgery within the United Kingdom on foreign or colonial diplomas or degrees before the passing of this Act; and also in favour of any persons who have held appointments as surgeons or assistant surgeons in the army, navy, or militia, or in the service of the East India Company, or are acting as surgeons in the public service, or in the service of any charitable institutions, and also, so far as to the Council shall seem expedient, in favour of medical students who shall have commenced their professional studies before the passing of this Act.

XLVI. *New Charter may be granted to the College of Physicians of London.*—It shall be lawful for Her Majesty to grant to the corporation of the Royal College of Physicians of London a New Charter, and thereby to give such corporation the name of "The Royal College of Physicians of England," and to make such alterations in the constitution of the same corporation as to Her Majesty may seem expedient; and it shall be lawful for the said corporation to accept such charter under their common seal, and such acceptance shall operate as a surrender of all charters heretofore granted to the said corporation, except the charter granted by King Henry VIII., and shall also operate as a surrender of such charter and of any rights, powers, or privileges conferred by or enjoyed under an act of the session holden in the fourteenth and fifteenth years of King Henry VIII., chapter 5, confirming the same as far as such charter and act respectively may be inconsistent with such new charter: provided, nevertheless, that within twelve months after the granting of such charter to the College of Physicians of London, any fellow, member, or licentiate of the Royal College of Physicians of Edinburgh, or of the Queen's College of Physicians of Ireland, who may be in practice as a physician in any part of the United Kingdom called England, and who may be desirous of becoming a member of such College of Physicians of England, shall be at liberty to do so, and be entitled to receive the diploma of the said College, and to be admitted to all the rights and privileges thereunto appertaining, on the payment of a registration fee of £2 to the said College.

XLVII. *Her Majesty may grant power to College of Surgeons to institute examinations as to fitness of persons to act as dentists.*—It shall, notwithstanding anything herein contained, be lawful for Her Majesty, by charter, to grant to the Royal College of Surgeons of England power to institute and hold examinations for the purpose of testing the fitness of persons to practise as dentists who may be desirous of being so examined, and to grant certificates of such fitness.

XLVIII. *New charter may be granted to College of Physicians of Edinburgh.*—It shall be lawful for Her Majesty to grant to the corporation of the Royal College of Physicians of Edinburgh a new charter, and thereby to give to the said College of Physicians the name of "The Royal College of Physicians of Scotland," and it shall be lawful for the said Royal College of Physicians, under their common seal, to accept such new charter, and such acceptance shall operate as a surrender of all charters heretofore granted to the said corporation.

XLIX. *The Faculty at Glasgow may be amalgamated.*—If at any future period the Royal College of Surgeons of Edinburgh and Faculty of Physicians and Surgeons of Glasgow agree to amalgamate, so as to form one united corporation, under the name of "The Royal College of Surgeons of Scotland," it shall be lawful for Her Majesty to grant, and for such College and Faculty, under their respective common seals, to accept such new charter or charters as may be necessary for effecting such union, and such acceptance shall operate as a surrender of all charters heretofore granted to such College and Faculty; and in the event of such union it shall be competent for the said College and Faculty to make such arrangements as to the time and place of their examinations as they may agree upon, these arrangements being in conformity with the provisions of this Act, and subject to the approval of the General Council.

L. *New charter may be granted to the King and Queen's College of Physicians in Ireland.*—It shall be lawful for her Majesty to grant to the corporation of the King and Queen's College of Physicians in Ireland a new charter, and thereby to give to such corporation the name of "The Royal College of Physicians of Ireland," and to make such alterations in the constitution of the said corporation as to her Majesty may seem expedient; and it shall be lawful for the said corporation to accept such charter, under their common seal, and such acceptance shall operate as a surrender of the charter granted by King William and Queen Mary, so far as it may be inconsistent with such new charter.

LI. *Charters not to contain new restrictions in the practice of medicine or surgery.*—Provided always, that nothing herein contained shall extend to authorize her Majesty to create any restriction in the practice of medicine or surgery, or to grant to any of the said corporations any powers or privileges contrary to the common law of the land or to the provisions of this Act, and that no such new charter shall in anywise prejudice, affect, or annul any of the existing statutes or bye laws of the corporations to which the same shall be granted further than shall be necessary for giving full effect to the alterations which shall be intended to be effected by such new charters and by this Act in the constitution of such corporation.

LII *Provisions of* 17 & 18 Vict. c. 114, *as to University of London to continue in force.*—The enactments and provisions of the University of London Medical Graduates Act, 1854, shall be deemed and construed to have applied and shall apply to the University of London for the time being, notwithstanding the surrender or determination of the therein-recited Charter, and the granting or acceptance of the now existing Charter of the University of London, or the future determination of the present or any future Charter of the said University, and the granting of any new Charter to the said University; and that every Bachelor of Medicine and Doctor of Medicine of the University of London for the time being shall be deemed to have been and to be entitled and shall be entitled to the privileges conferred by the said Act, in the same manner and to the same extent as if the Charter recited in the said Act remained in force, subject nevertheless to the provisions of this Act.

LIII *Pharmacopœia.*—The General Council shall cause to be published under their direction a book containing a list of medicines and compounds, and the manner of preparing them, together with the true weights and measures by which they are to be prepared and mixed, and containing such other matter and things relating thereto as the General Council shall think fit, to be called "British Pharmacopœia;" and the General Council shall cause to be altered, amended, and re-published such Pharmacopœia as often as they shall deem it necessary.

LIV. *Chemists, &c., not to be affected.*—Nothing in this Act contained shall extend or be construed to extend to prejudice or in any way to affect the lawful occupation, trade, or business of chemists and druggists and dentists, or the rights, privileges, or employment of duly licensed Apothecaries in Ireland, so far as the same extends to selling, compounding, or dispensing medicines.

SCHEDULE (A.)

1. Fellow, Licentiate, or Extra Licentiate of the Royal College of Physicians of London.
2. Fellow or Licentiate of the Royal College of Physicians of Edinburgh.
3. Fellow or Licentiate of the King's and Queen's College of Physicians of Ireland.
4. Fellow or Member or Licentiate in Midwifery of the Royal College of Surgeons of England.
5. Fellow or Licentiate of the Royal College of Surgeons of Edinburgh.
6. Fellow or Licentiate of the Faculty of Physicians and Surgeons of Glasgow.
7. Fellow or Licentiate of the Royal College of Surgeons in Ireland.
8. Licentiate of the Society of Apothecaries, London.
9. Licentiate of the Apothecaries' Hall, Dublin.
10. Doctor, or Bachelor, or Licentiate of Medicine, or Master in Surgery of any University of the United Kingdom; or Doctor of Medicine by Doctorate granted prior to passing of this Act by the Archbishop of Canterbury.
11. Doctor of Medicine of any Foreign or Colonial University or College, practising as a Physician in the United Kingdom before the 1st day of October, 1858, who shall produce certificates to the satisfaction of the Council of his having taking his Degree of Doctor of Medicine after regular examination, or who shall satisfy the Council, under Section Forty-five of this Act, that there is sufficient reason for admitting him to be registered.

SCHEDULE (B.)

Declaration required of a person who claims to be registered as a Medical Practitioner, upon the ground that he was in practice as a Medical Practitioner in England or Wales before the 1st day of August, 1815:

To the Registrar of the Medical Council.

I,   residing at   in the County of   hereby declare that I was practising as a Medical Practitioner at   in the County of   before the 1st day of August, 1815.

(Signed)   [*Name*]

Dated this   Day of   185 .

SCHEDULE (D.)

Name.	Residence.	Qualification.
A. B.	London . .	Fellow of the Royal College of Physicians of———
C. D.	Manchester	Fellow and Member of the Royal College of Surgeons of England.
E. F.	Dublin . .	Graduate in Medicine of University of Dublin.
G. H.	Bristol . .	Licentiate of the Society of Apothecaries.
I. K.	London . .	Member of College of Surgeons or Licentiate of the Society of Apothecaries.

Miscellaneous Correspondence, &c.,

"Audi alteram partem."

DETERMINATION OF SULPHUR, AND THE SOLUBILITY IN NITRIC ACID OF SULPHATE OF BARYTA.

To the Editor of The Lancet.

Sir,—"There are few substances," remarks Professor Calvert, in an able paper recently read before the Manchester Philosophical Society, "more frequently met with, and which require, in spite of what some chemists assert, to be determined *with greater precaution*, than sulphur and its compounds, and it is therefore of the utmost importance to possess exact means of knowing their proportions. If one looks over all the best analytical works of the day, they all assert 'that sulphate of baryta was so insoluble that it was sufficient to add chloride of barium or nitrate of baryta to a solution containing a sulphate, *with an excess of acid*, in order that the sulphuric acid existing in a menstruum should be *exactly* determined.'" In the paper above alluded to, Professor Calvert states that he is convinced that sulphate of baryta is soluble in acid and water, 1000 grains of nitric acid (sp. gr. 1·167) dissolving *two grains* (*!*) of sulphate of baryta, and *one* grain being taken up by 140,000 grains of water.

Now, as regards the solubility in nitric acid, it is most essential for all analytical chemists to be aware of this, and in future to avoid determining sulphur *by oxidation with nitric acid*, for, even in the hands of the most expert chemists, the truth will not be arrived at, as evidenced by the following determinations:—A sulphur compound, oxidized by nitric acid with the greatest care, yielded 47·47 per cent. of sulphur, whereas the same, after fusion with nitrate of potassa, and precipitation with nitrate of baryta, &c., gave 48·09 per cent. of sulphur. Again, a pure bisulphide, which was known *theoretically* to contain 53·33 per cent. of sulphur, gave by the nitric acid process 52·94, and by the saltpetre fusion 53·31.

Knowing that these facts will prove valuable if given in your extensively-known journal, I beg you to insert them, and remain, Sir,

Yours most respectfully,
Sheridan Muspratt, M.D., &c.,
Professor of Chemistry.
College of Chemistry, Liverpool, July, 1858.

MEMORIAL STATUE OF THE LATE MUNGO PARK.

To the Editor of The Lancet.

Sir,—It has been proposed to erect a statue at Selkirk in memory of Mungo Park, the foremost of all our African explorers. Selkirk has been selected, as being the county town of the shire in which he was born, and in which he passed many years as apprentice to a country surgeon, to whose daughter he was married, and whose son accompanied him on his last fatal expedition. The sum already raised is £150; this is all that is at present at the command of the committee who have taken charge of the getting up of the monument. The execution of the work has been entrusted to Mr. Currie, also a native of Selkirkshire, and who has already executed in wood several very beautiful works. The sum, as I have said, at the disposal of the committee is £150; but to finish the monument so as fully to realise the idea of the sculptor would require at least the further sum of £250 to be raised. At present means are being taken to effect this; and I have thought it right to help forward the good cause by bringing the matter before your numerous readers. Our profession should feel no slight interest and no slight pride in Mungo Park, seeing that he belonged to our hard-working body. When at Peebles he stated to Sir Walter Scott that he considered a country doctor had to get through more hard and harassing work than he had encountered whilst exploring the wilds of Africa. I think it would be a proper and gracious thing in our brethren in England (many of whom are natives of Scotland, and have a deep and abiding interest in all that concerns her), out of their abundance, to help in raising this sum. I therefore, through your columns, make this appeal to them. Monuments or statues to medical men are not very common things; and therefore when a fair and proper object of this kind is presented, I think the profession should support it. It is a thing fitted to cover us with shame that more than fifty years have passed since Mungo Park died on the banks of the Niger,—the first of that noble line of explorers who have attempted, and that so successfully, to dispel the darkness that covered as with a cloud the mysterious rovers of Central Africa, and increased our knowledge of, and extended our power and fame in, that long-neglected country,—and that, as yet, no stone or monument should, in his own well-loved country, tell the story of his daring and his dying. If any of your readers feel inclined to subscribe to this monument, and so do something to honour one to whom honour is due, I shall be most happy to receive their subscriptions.

I am, Sir, yours truly,
Wm. N. Brown, M.D.
St. John's, Melrose, July 1858.

THE MARSHALL HALL METHOD OF TREATMENT IN ASPHYXIA.

To the Editor of The Lancet.

Sir,—A novel and important discovery like Dr. Marshall Hall's should, I think, be still further supported by cases. I, therefore, beg to state that I succeeded in resuscitating by the Ready Method, two children apparently dead at birth. There was nothing particular in the first case; but in the second I found the child with a footling presentation, in the world, excepting the head, and had been in that position about ten minutes, with the face to the sacrum. The funis was twice round the neck. I delivered as quickly as I could. The infant gave no signs of life, and I thought it almost useless to try any plan. But after proceeding a short time with Dr. Marshall Hall's, the child began to breathe, and in about twenty minutes I succeeded in my endeavours. Now, during the time the child's head was in the vagina it had imbibed a considerable quantity of glutinous discharge from the mother, which came away by degrees as it was turned on its face. That alone, I conceive, was sufficient to have hindered the ingress of air had it been kept in the upright position, which the old plan of a warm-bath rendered necessary. The old plan could be seldom used as quickly as the cases required, especially in the houses of the poor, who seldom have the requisite quantity of warm water at hand, or the pan or bath ready to receive the child.

Dr. Marshall Hall's plan, therefore, pre-eminently stands forth as "The Ready Method."

I am, Sir, your obed't serv't,
Jas. Morss Churchill, M.R.C.S.
Colchester, July, 1858.

THE MARSHALL HALL METHOD OF TREATMENT IN ASPHYXIA.

To the Editor of The Lancet.

Sir,—Your correspondent from Columbia, Tennessee, U.S.,* appears to be much interested in the method of treatment in asphyxia recommended by the late Dr, Marshall Hall, and generally known as the "Marshall Hall" or "Postural Method." Allow me, through the medium of your journal, to call his attention to the results of my experiments and observations on this important subject.

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* *Vide*, July No. p. 66.

The principle involved in the postural method is precisely the same as in a plan formerly much practised, in which simple compression and relaxation of the chest were employed to induce expiration and inspiration. The difference is this, that in the postural method the compression of the thorax is occasioned by the weight of the body of the patient resting on the chest during the prone position, followed by the removal of the pressure and consequent return of the thoracic parietes to their ordinary level on the patient assuming the supine posture. No attempt is made to enlarge the actual capacity of the chest by inducing an elevation of the ribs, such as takes place on making a deep inspiration.

This method of treatment has been found open to some objections; for instance—

1. Expiration is made to precede inspiration, whereas originally expiration is second in order, and not the primary act. In still-born infants, whose lungs have never been inflated, forced expiration at first is of course impossible.

2. The expansion of the thorax or inspiration, being dependant on little more than the elasticity of the tissues, takes place feebly, inefficiently,and therefore calls for some more active mechanical aid.

3. It is scarcely possible to use the warm-bath, if indicated, in the case of a still-born infant, during the adoption of the postural method.

4. The patient is liable to have the mouth and nose compressed, the face bruised, or the neck twisted, by the almost lifeless body being turned alternately on the chest and back fifteen times a minute for some hours; moreover to the operator this process is very arduous.

5. When the body is "turned on the face, and pressure made on the back" (pronated), the contents of the stomach are liable to pass into the œsophagus and windpipe.

6. When the patient is turned "completely on the side and a little beyond," (supinated,) the tongue obstructs inspiration by falling back into the throat, the epiglottis resting against the back of the pharynx.

7. Both sides of the chest are not equally inflated, one side only being called into action at the same time to any important extent.

8. This process is not entirely in harmony with that of Nature. It is not the way in which we generally breathe.

9. That the amount of air respired is exceedingly small, as has been proved by actual experiment. This is doubtless in consequence of the actual capacity of the chest not being increased.

The method of performing the experiments, at St. George's Hospital, on the dead subject, which appeared to prove that in the Marshall Hall Method "nearly as much air entered the lungs as would be inhaled in an ordinary inspiration in a state of health," is, I believe, by no means satisfactory; it is, in fact, open to obvious objections. The tube of the pnæometer was passed into one of the nostrils of the patient, the other nostril and the lips being closed with adhesive plaster. The want of rigidity of the cheeks, and the amount of air in the respiratory tract, and even in the stomach, &c., of the patient, could scarcely fail to render the indications of the instrument, however perfect in itself, liable to suspicion, if not entirely valueless, in point of scientific accuracy.

The method which I have ventured to bring before the profession, is not open to any of the above objections. It is a simple imitation of natural deep respiration, and effected by means of the same muscles as are employed by Nature in that process. In ordinary deep inspiration, we lift the ribs and sternum by the pectoral and other muscles, which pass between the chest and the shoulders, and thus produce the threatened vacuum which inflates the lungs.

In my method we lift the ribs and sternum by the pectoral and other muscles which pass from the shoulders to the parietes of the thorax, by steadily extending the arms up by the sides of the patient's head; by elevating the ribs, the cavity of the chest is enlarged, a tendency to a vacuum is produced, and a rush of air immediately takes place into the lungs. Expiration is brought about by simple compression of the sides of the chest by the patient's arms.

The distinguishing feature of my method is the actual enlargement of the cavity of the chest.

In order to maintain a free entrance of air into the windpipe, we draw forward the patient's tongue, and keep it projecting beyond the lips. If the lower jaw be gently raised, the teeth may be made to hold the tongue in the required position. Should it be found necessary, the tongue may be so retained by passing a handkerchief under the chin and fastening it over the head.

In this way the patulous orifice of the windpipe is raised and drawn forward, so that nothing intervenes between it and the natural channel of air through the nose. The tongue is entirely prevented from falling back into the throat, whilst the extent to which the windpipe put on the stretch is clearly indicated; the pharynx also is sufficiently opened to allow of the removal of liquids, &c., from the mouth, nose, pharynx, &c.

My method has been tested by experiment on the dead body with most satisfactory results; and a successful case of resuscitation has already been recorded.—Yours obediently,

Henry R. Silvester, B.A., M.D. Lond.

High Street, Clapham, 1858.

FALLING OFF OF THE HAIR.

To the Editor of The Lancet.

Sir,—Could you or any of your readers inform me of any application that would prevent the hair from falling off? The hair bulb is much diminished in size, and a microscopic examination proves it to be less fibrous than usual. I have for some time passed used the so-called specifics, yet the hair has a decided tendency to fall, particularly in the morning. There is no secondary or any constitutional debility from a long-continued illness.

I am, Sir, yours obediently,
June, 1858. Juvenis.

VALERIANATE OF AMMONIA.

To the Editor of The Lancet.

Sir,—It is much to be desired that some definite formula should be given when any new preparation is brought into notice, so that it may receive a fair and impartial trial. If it should then prove useful and worthy a permanent place in the list of therapeutic agents, well and good; if not, let it be discarded.

We refer, on the present occasion, to valerianate of ammonia, which has of late attracted much notice both in this country and in France as a remedy in neuralgia, hysteria, and other nervous affections, but which we fear is getting into some disrepute through the uncertainty of the preparation as regards its strength. Hitherto it has been supplied, almost exclusively, in a state of solution, the variations in which we cannot better illustrate than by stating that at the present time one house is supplying a solution containing fifty per cent. of the salt, a second twenty-five per cent., and others as little as 1·6 per cent. Can anything be more annoying to the physician, or tend so readily to throw a new and, we think, valuable preparation into disuse more surely than the want of uniformity such as is here instanced?

Valerianate of ammonia is a crystalline and soluble salt. The dose is from five to thirty grains two or three times a day, and if ordered in that state will be found much more likely to fulfil the expectations of the prescriber.

We are, Sir, your obedient servants,
Perrins and Barnitt.

Pharmaceutical Laboratory, Conduit-street,
Regent-street, July, 1858.

FILTRATION THROUGH STONE.

To the Editor of The Lancet.

Sir,—You once kindly noticed my remarks on the subject of olive oil and other oils as being of service to man, and I am glad that I now see a prospect of seeing these oils more thoroughly cleansed —viz., by filtration through stone, cut across the strata into slices. Newly-formed sandstone will filter all oils or juices. I am in hopes this letter may call the attention of some of your numerous scientific readers to the efficacy of pure filtered oils. All colouring matter is vegetable matter in a septic or decomposing state. Cocoa-nut or palm oil would be highly palatable if they could be filtered. I have much more to say on the subject of the use of stones cut by machinery for baking and other domestic purposes. I have received every assistance from a gentleman in that noble institution, the Geological Museum.

Yours obediently and respectfully,
C. M'Kenzie Dick, Senior.

School of Practical Chemistry, Dufours-place,
Golden-square, July, 1858.

CURIOUS INSTANCE OF DISLOCATION OF THE HUMERUS.

To the Editor of The Lancet.

Sir,—The following case having come under my notice, I have forwarded the particulars for insertion in your columns.

I am Sir, your obedient servant,
Horace S. Howell, M.R.C.S

Cirencester, July, 1858.

On the evening of the 4th inst., a female, aged twenty-three, while walking, was met by a friend, with whom she shook hands, and immediately complained of severe pain in the right shoulder-joint, with inability to raise the arm, accompanied by a sense of syncope. On examination it was evident that she had sustained a dislocation of the head of the humerus into the axilla, which was readily reduced, the head of the bone returning to its normal position with an audible snap.

HEREDITARY MALFORMATIONS.

To the Editor of The Lancet.

Sir,—The following instance of hereditary malformation may be interesting to some of the readers of your valuable journal.

I am, yours faithfully,
Arthur J. Cumming, M.R.C.S.

Southernhay, Exeter, 1858.

William S——, aged eighteen, came to me with headache. On feeling his pulse, I found three fingers united throughout by skin—viz., the middle, ring, and little finger. Both hands were alike. The mother then held up her hands, which were similarly malformed. She had had seven children: no others malformed. Her uncle (father's brother) had the corresponding fingers in each hand similarly joined; and her paternal grandfather had the three smaller toes on each foot similarly united. The hands of the mother and son were otherwise well formed and very strong.

ESTIMATING NITRIC ACID.

[Note from Dr. Sheridan Muspratt.]

To the Editor of The Lancet.

Sir,—In the last edition of Fresenius's "Quantitative Analysis," is a very serious mistake, and one which has to my knowledge led several chemists astray in estimating the quantity of nitric acid in the nitrates of commerce. At p. 275 of the above-mentioned work is the following:—"Mix the triturated compound with two to three parts of perfectly anhydrous biborate of soda; put this mixture into a platinum crucible; weigh this with its contents; heat very gradually until the mass is in a state of fusion; cool, and weigh again. The diminution of weight *gives the quantity of nitric acid originally present.* The results are accurate." Fresenius, who is one of the best chemists of our time, must allude to *perfectly pure anhydrous* salts, because if the nitrate of soda, or potassa of commerce, be taken, the following are eliminated with the nitric acid: sulphuric and hydrochloric acid, and water; so that the loss sustained can *give no idea of the quantity of nitric acid in the sample.* Boracic being a fixed acid, *expels all the mineral acids from their combinations in the heat.*

I remain, Sir, yours respectfully,
SHERIDAN MUSPRATT, M.D., &c.,
Professor of Chemistry.

College of Chemistry, Liverpool.

PREPARATION OF COD-LIVER OIL.

To the Editor of THE LANCET.

SIR,—The best method of preparing cod-liver oil in small quantities is simply by dividing the cod-liver into small pieces, putting them into a pipkin, and subjecting them to a *gentle* heat, pouring off the oil as it accumulates.

Your obedient servant,
CHARLES F. DRAPER, Res't Dispenser.

Cancer Hospital, Brompton, July 1858.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—Having had several distressing cases of hydrophobia here lately, I am anxious to know if you have any information on the subject of a reputed cure for the disease (or rather a prophylactic), brought into notice some twenty years ago by a Mr. Marochetti, of Moscow. The medicine used appears to have been genista lutea; but the treatment seems to have consisted principally in opening and cauterizing certain vesicles under the tongue, which are said to show themselves invariably. I shall be very much obliged if any of your readers could give me an answer to this in one of your early numbers.

I received an account of the above remedy the other day from England. Any suggestion in the treatment of this dreadful disease will be thankfully received.

I am, Sir, your obedient servant,
WALTER A. LESLIE, Civil Surgeon.

Cochin, Madras, March, 1858.

TREATMENT OF AGUE.

To the Editor of THE LANCET.

SIR,—A Sussex Union Surgeon informs me that iodide of potassium, in eight-grain doses, every four hours, is an infalliable remedy for ague, and when there is great debility from age, two grains of quinine are to be added to each dose. There is no fear of chemical decomposition, as the dilute sulphuric acid required is in so small a quantity as not in any way to interfere with the iodine.

Your obedient servant,
A NON-METALIC HEART.

June, 1858.

CANCER.

To the Editor of THE LANCET.

SIR,—In the interesting work, "Missionary Travels in South Africa," by David Livingstone, London, 1857, at page 505 is the following remarkable passage:—"Cancer and many diseases common in England are here quite unknown."

I am inclined to think this fact not undeserving the attention of those engaged in investigating the cause of diseases in this country, having observed the almost complete exemption from this disease in an inland county, in a district occupied by an agricultural population, and its lamentably frequent existence in a circuit near London, where I have, as well as in the former instance, had rather an extensive field of observation.

I merely offer these remarks to the profession, and should be happy should they lead to any beneficial result.

I am, Sir, your very obedient servant,
QUONDAM.

Cheltenham, July, 1858.

DEATH OF SIR PHILIP CRAMPTON, BART.,

SURGEON-GENERAL TO THE FORCES IN IRELAND.

IT is our painful duty to record the death of (if not the ablest) certainly one of the first surgeons that the sister kingdom has ever produced. We allude to Sir Philip Crampton, who died at his residence, Merrion-square, Dublin, on the 10th instant, in the 82nd year of his age, having been born on the 7th of June, 1777. His family were originally English, and resided at South Cottingham, Notts; but leaving this county in the reign of King Charles the Second, they settled in Ireland, and remained permanently there, furnishing from that period to the present, many able members to the profession of medicine, the church, and the bar. Sir Philip, the subject of our present notice, was bred to the former of these, and at a very early age embraced the military branch, serving as an assistant-surgeon in the disturbed times prior to 1798, and being present with the force which repulsed the landing of the French on the west coast of Ireland. Towards the close of that year he was nominated surgeon to the Meath Hospital (one of the infirmaries of Dublin). This event determined him to relinquish the military for civil practice, and he accordingly settled in Dublin late in the autumn of 1790. He commenced business in a house in Dawson-street, where he established himself as a teacher of anatomy, having a dissecting-room and medical school fitted up in the rear of the premises. Here, in a loft over his stable, he first began to lecture, and his style of teaching, combined with his perfect knowledge of the subjects which he taught, soon obtained for him a large class of pupils, whilst his fame as a surgeon became equally established by his practice in the wards, and his skill as an operator in the theatre of the hospital. Combined with these professional qualifications, he was possessed of a pleasantness of manner and a winning way, which, in the sick room, were irresistible, and he soon become a general favourite with the public. It was not, however, in mere conversation, or in the relation of anecdote, that Sir Philip Crampton excelled; his intellectual capacity was equally conspicuous upon whatever subject came before him. To a powerful mind, well cultivated and well stored in early youth, he daily added up to the latest period of his existence. His bodily powers equalled his mental capabilities, and there were not many who, in athletic pursuits, or in the hunting field, could show the way to Philip Crampton. Handsome in person, gifted in mind, with an off-hand, open, and manly bearing, there were few who were his equals. Such was the man of whom we now speak.

As a surgeon he was ready in resources and original in idea, seldom meeting a difficulty that he did not surmount. As a physician he was peculiarly happy in the selection of remedial measures, not merely looking upon the malady in question as disease *per se*, but rather regarding the individual in his every relation to life, and often prescribing to an end far remote from the then predominating symptoms. As a man of science he was generally able; but to zoology and comparative anatomy he paid particular attention, regarding them as subservient to the one great end—the preservation of human life. He was a patron of everything that could promote this object. He assisted in the foundation of the Royal Zoological Society of Ireland, and by his influence obtained a grant of the ground in the Phœnix-park, on which the Zoological Gardens have been established. His public appointments were numerous. He was nominated as Surgeon-general to the Forces in Ireland by the Duke of Richmond, on the death of Mr. Stewart, and subsequently appointed Surgeon in Ordinary to Her Majesty. He was consultant to the majority of the hospitals in Dublin. He was also a member of the Senate of the University of London, although we believe he never took his seat. He was a member of the Senate of the Queen's University, and thrice President of the Royal College of Surgeons in Ireland. Sir Philip Crampton was raised to the baronetage in 1839, and is succeeded in the title by his eldest son, John Fiennes Crampton, our ambassador to the Court of Russia.

SCOTLAND.

(FROM OUR EDINBURGH CORRESPONDENT.)

It is painful to have to assert that the cloud of discord hangs more heavily over Edinburgh than elsewhere; nevertheless, this seems to be the case, judging from many instances of no distant date. At elections for medical chairs, especially, this fact may be observed. At the election for the Chair of Chemistry on the 28th ult., the name of Dr. Blyth having been withdrawn, the town-clerk stated that a letter had been received from Dr. Douglas Maclagan on the subject of the election, with a request that it should be read. In his letter Dr. Maclagan states that Dr. Simpson called on him the previous evening with a request that he should withdraw the name of Dr. Anderson as a candidate. To this Dr. Maclagan refused to accede; upon which it is stated that Dr. Simpson observed, "Two of Dr. Anderson's leading supporters will leave him." Dr. Maclagan continues: "On my still declining to take any steps in this matter, Dr. Simpson said to me, 'Then Dr. Anderson, next year, will lose his appointment as chemist to the Highland Society.' To this I replied that it was not the gift of the Town Council, and they could not work the result." Dr. Simpson's reply, writes Dr. Maclagan, was, "It shall be worked." It is very much to be regretted that this conversation, whether the identical one or not, should have been brought before the public. Dr. Playfair's election amounted to a certainty; and that which was purely a *tête-à-tête*, might have remained so. At the close of the proceedings, a letter was read from Dr. Simpson, which it is only justice to insert here: "I have this moment had a letter of Dr. D. Maclagan to the Lord Provost placed in my hands. Allow me merely to state that Dr. Maclagan's account of our interview is *quite* incorrect in various particulars; that I called out of kindness both to Dr. Maclagan and Dr. Anderson, and for the good of the Universities of Edinburgh and Glasgow; and that I am greatly astonished indeed to find any gentleman make thus a public use of a private conversation." Thus the matter rests: *requiescat in pace!* The result of the election was, as every one anticipated, in favour of Dr. Lyon Playfair; the numbers being—for Dr. Playfair, 25; for Dr. Anderson, 9; whereupon Dr. Playfair was declared duly elected.

For some time past the progress of the University Bill has been watched with lively interest, and, despite the opposition of the Town Council, a successful result seems to be no longer a matter of doubt. One great and singular imperfection, however, exists—namely, the exclusion of the medical graduates from the government of the Universities. When it is recollected that Edinburgh owes her high collegiate status to the reputation of her medical schools, has fourteen medical chairs, and confers annually a far greater number of degrees in medicine than in arts, such an exclusion appears impolitic and unjust. Considerable feeling has therefore been evinced on the subject, and, with a view to remedy the evil, a large meeting of graduates was held in St. George's Hall on the 29th ultimo. Dr. Begbie occupied the chair, and resolutions condemnatory of the exclusion were passed. It has been affirmed that the professors were adverse to the cause of the graduates, and the presence of several at the meeting called forth a suggestion that a memorial on the subject should be sent from them. Dr. Gairdner thought this should have been done long ago—an expression which threw the *onus probandi* upon Dr. Christison, who, after some little discussion, stated that such a memorial had been sent. Dr. Gairdner, however, was perfectly right; for it is singular that in Edinburgh, and especially to those who have long in public advocated the necessity of the measure, this assistance from the professors was unknown, and also that reports and statements in the papers that the professors were averse to the measure should have been suffered to pass without contradiction, when the desired assistance had actually been given. It must be gratifying to Dr. Gairdner and the graduates to learn, for the first time, that there "has been a representaton sent by the faculty." A committee was appointed to carry out the intention of the resolution, consisting of the following gentleman:—Dr. Begbie, Dr. R. B. Malcolm, Dr. Andrew Wood, Dr. Struthers, Dr. Alexander Wood, Dr. Haldane, Dr. Charles Wilson, Dr. George Wilson, Dr. Murray, and Dr. Brown. The meeting then adjourned.

News Items, Medical Facts, &c.

ACADEMY OF MEDICINE OF PARIS.—PUERPERAL FEVER.—For the last four months an animated discussion has been carried on before the Academy touching the pathology and treatment of this disease; and it must be confessed that great talent has been displayed by the different orators. Amongst these, we would especially mention Messrs. Paul Dubois, Trousseau, Depaul, Cazeaux, Danyan, and Jules Guérin. On the 7th inst., M. Guérard, with whom the discussion had originated, resumed the debate; and considered it as proved, by Messrs. Dubois, Depaul and Cazeaux, that there exists a special disease to which the name of puerperal fever may justly be given; that this complaint has peculiar characters which distinguish it from other affections with which some have endeavoured to class it; and that these characters may be placed under the following heads: 1. A fixed period of invasion; 2. Symptoms of a special nature, and presenting a special mode of evolution; 3. Peculiar pathological alterations; and 5. Power of transmission by way of infection. Contagion does not seem to have been proved by the discussion; nor has the treatment by quinine been shown to be worthy of support. Many prophylactic means had been mentioned and proposed in the course of the debates, but no satisfactory conclusion was arrived at. The results of this vast expenditure of time and eloquence on the part of well-informed and experienced men are certainly meagre; but it redounds greatly to the praise of the leading members of our profession in Paris, that they are ever ready to diffuse, with disinterested energy, the treasures of knowledge which they have acquired by many years' experience and indefatigable labour.

PENSION TO A SURGEON.—The Emperor of the French has bestowed on Dr. Des Brulais, the surgeon of the *Regina Cœli*, a pension of 1800 francs, for his services on a late occasion as medical officer to the above-named vessel.

DISEASE AMONGST THE EUROPEAN TROOPS IN INDIA.—Sickness is all but universal. The smallpox is bursting out here and there, half the European community have fevers, and a moiety of the other half only escape the curse by an infliction which, though not unhealthy, is even more unendurable—innumerable boils. In Allahabad, out of 1600 Europeans not 900 are fit for duty, and the number of deaths from "apoplexy"—that is, sunstroke—exceeds the mortality from all other sources. In the midst of all this there are regiments in which the stock is maintained, and in which punkahs paid for by Government are forbidden. This is a fact, and I enclose the name and address of a gentleman, who when this letter arrives will be in England, who can give evidence as to the tenacity with which some officers cling to European theories. The Duke of Cambridge should stop all this by forbidding the stock in India at once,—its use is optional, I believe,—and compelling the commanding officers to leave the punkahs alone. England will be not a little indignant at the cost of life involved in all this—partly, doubtless, unavoidable, but partly the result of want of forethought. The Royal Artillery, for instance, are losing men at the rate of fourteen per cent. per annum, exclusive of fighting casualties. Again, the men are now dressed in light-coloured cotton cloth, capital stuff to resist the climate; but their heads are still unprotected. They receive, it is true, a white cover for their caps, but it is no protection, except so far as its colour is concerned. No planter or engineer who had to be out in the sun would wear such a thing except over the "sola topee," the only hat for this climate, which Sir C. Napier advocated till he was sick, and which cost just six annas. I am diffuse on this point intentionally. Routine and the sun together are beating us, and I was told this morning that with all the reinforcements and recruits sent out we cannot muster even now 26,000 effective Europeans. By October a third of them will be off duty; for though the soldiers do not get apoplexy in barracks, they do get liver complaint and low debilitating fevers.—*Correspondent of the Times.*

CAREER OF A SURGEON-NATURALIST.—A letter from Monte Video, of May 29th, brings intelligence of the death of a remarkable Frenchman, M. Aimé Boussland, the naturalist, who died a few days previously at San Borja, at the age of eighty-five. M. Boussland was born at Rochelle, in 1773. He was the son of a physician, and was brought up to his father's profession, but the political events of the early republic compelled him to enter the navy. He made a long cruise as a naval surgeon, but took the earliest opportunity of returning to Paris to pursue his studies. There, at the house of M. Corvisart, he made the acquaintance of a young German of about his own age, who afterwards became known to the world as the celebrated Alexander de Humboldt. These young men became intimate friends; and when M. de Humboldt undertook his expedition to the equinoctial regions of the new world, M. Boussland accompanied him. During this journey M. Boussland collected and classed upwards of six thousand plants which were then unknown to botanical writers. On his return to France he presented his collection to the Museum of Natural History, and received the thanks of Napoleon I., who granted him a pension. The Empress Josephine was attached to Boussland. She made him her factor at Malmaison, and often sowed in her garden there flower-seeds which he had brought from the tropics. After the abdication at Fontainebleau, M. Boussland urged the emperor to retire to Mexico to observe events. A few weeks after tendering this fruitless advice, he sat by the death-bed of Josephine, and heard her last words. Her death and the definitive fall of the empire leaving him nothing to desire in France, he returned to South America, and became a professor of natural history at Buenos Ayres. Subsequently he travelled across the Pampas, the province of Santa Fé, Chaco, and Bolivia, and penetrated to the foot of the Andes. Being there taken for a spy, he was arrested by the governor of Paraguay, and was detained a prisoner for eight years, till 1829. On his release he directed his steps towards the Brazils, and settled at San Borja, where, in a charming but humble retreat, surrounded by orange groves and European shrubs, he remained to the day of his death, receiving with pleasure all French travellers who visited him. He was the author of (amongst other works) "Les Plantes Equinoxiales" (1805), "La Monographie des Melastonies" (1806), "Description des Plantes rares et de la Malmaison" (1813), "Vue des Cordillères et Monuments Indigène de l'Amerique" (1819), and (jointly with M. de Humboldt) "Voyage aux Regions Equinoxiales du Nouveau Continent."

Exclusion of Quack Medicines from Russia.—A notice from the Board of Trade appears in Tuesday night's *Gazette* stating that a despatch has been received from her Majesty's Chargé d'Affaires at St. Petersburgh, announcing that the importation of various "medicinal substances" into Russia has been prohibited. Amongst the excluded articles are Morrison's Pills and Revalenta Arabica.

Artificial Respiration in Chloroform Poisoning.—A case has occurred in Paris in which artificial respiration was resorted to with success, to obviate the effects of an over-inhalation of chloroform.

Casualties in the Russian Army in the Crimea.—A St. Petersburgh letter of July 5th, says:—"Fresh and harrowing details have just been published of the casualties suffered by the Russian army during the war in the Crimea. It appears that in the affair of the Tchernaia alone, on the 16th of August, 1855, there were 5048 wounded, amongst whom were 246 officers and seven generals. At Fort Nicholas, where the first hospital for the wounded was organized, as many as 200 amputations were performed in a single day, and one surgeon had often 500 patients to attend to. Most of the men who evacuated the Simpheropol hospital died on the march homewards. These revelations, proving how defective the Russian military administration is, have made a great sensation in St. Petersburgh.

Tablet to the late Hugh Miller.—A tablet of polished Peterhead granite is about to be placed in the wall at the head of Hugh Miller's grave, in the Grange Cemetery, Edinburgh. It is without any elaborate ornamentation, and its inscription runs thus:—"Hugh Miller, died 24th December, 1856, aged 54 years."

London Death-Rates.—An M.P. has stated, that "between the Temple and London-bridge the mortality on the south side of the river is double that of the city side. In St. Saviour's and St. Olave's, Southwark, 33 and 54 in every 1000 of the people die annually, while on the opposite side of the river the deaths are but 20 in every 1000." It appears, however, after deducting the deaths due to hospital patients (St. Thomas and Guy's) accidentally there located, the death-rate of 1856 was 22 per 1000, and of 1857, was 24 per 1000; while the rate of all London was 25 per 1000.

Re-vaccination.—The Paris correspondent of a daily paper writes that re-vaccination does not seem to have agreed with the French army. In the 10th regiment of Artillery, operated on at Toulouse, so many men are said to have been laid up in consequence, that the Emperor has sent his physician, Dr. Larrey, to see about it.

Vaccination in England and Wales.—During the year ending Sept. 29th, 1857, 423,421 persons were vaccinated by the public vaccinators in England and Wales; of these, 411,268 were successful cases.

St. John Long, the Quack.—It appears by some late proceedings in Chancery, that the trustees of St. John Long sold his secret remedy for £10,000.

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CREATININE.

CREATININE is present, together with creatine, in the fluid surrounding the muscular fibre; it has likewise been found in the blood, in the water of the amnion, and it is very frequently contained in the urine.

MM. Robin and Verdeil state that they have found it in the urine of the horse, and particularly in that of the pig and sheep, while I have very frequently detected it in the urine of man.

While the amount of creatinine in the muscles is smaller than that of creatine, in the urine the proportions are reversed. It exists in the urine generally in a free state.

Chemical Characters of Creatinine.

It dissolves in 11·5 parts of water of an ordinary temperature, more readily in hot and boiling water. 100 parts of ordinary cold alcohol dissolve about one part of creatinine; in boiling alcohol it dissolves in such quantity that the solution, on cooling, becomes crystalline; it is slightly soluble in ether; it possesses a caustic taste, and a strong alkaline reaction, turning reddened litmus blue, and turmeric paper brown; it forms crystallizable salts with acids, as the hydrochlorate and sulphate. A moderately concentrated solution of nitrate of silver, added to a solution of creatinine, causes a congelation into a network of acicular crystals; a solution of corrosive sublimate yields a curdy precipitate, which soon becomes crystalline; chloride of zinc likewise forms a crystalline granular precipitate. Bichloride of platinum yields no precipitate when the solution is somewhat dilute; hydrochlorate of creatinine forms with this salt a compound which crystallizes in crimson prisms, while with all the salts of copper, creatine forms crystallizable salts of a blue colour. It has the following composition:

Carbon,	8 atoms,	42·48
Hydrogen,	7 "	6·19
Nitrogen,	3 "	37·17
Oxygen,	2 "	14·16
		100·00

The hypothesis of Berzelius respecting its theoretical composition is most probably correct—namely, that it is ammonia conjugated with a highly nitrogenous body, containing one atom less hydrogen than caffeine; a comparison of the formulæ shows that creatinine contains exactly two atoms less of water than anhydrous creatine.

Microscopical Characters of Creatinine.

The microscopical characters of creatinine are particularly well marked; the form and grouping of the crystals are so distinctive, that, as I showed in my review of Dr. Bird's "Urinary Deposits, published in the *Medico-Chirurgical Review* for July, 1853, they may be readily detected in drops of urine evaporated on a glass slide.

"Creatinine appears to us to crystallize in the third type, that of the *right rectangular prism*, and not in the fifth type, that of the oblique rectangular, or rhomboidal prism, (monoklinometric of German authors.) It is, consequently, the same type as creatine, but in place of presenting, like creatine, forms approximating either to the system of prisms with a rhomboidal base, or to the system of prisms with a rectangular base with different groupings, creatinine never departs from the system of prisms with a rectangular base. The only decreases (*décroissements*) which it exhibits have the form of diamonds (*briseaux*) upon the two great ridges of the base; the groupings are much less numerous, and altogether different from those of creatine."—(MM. Robin and Verdeil.)

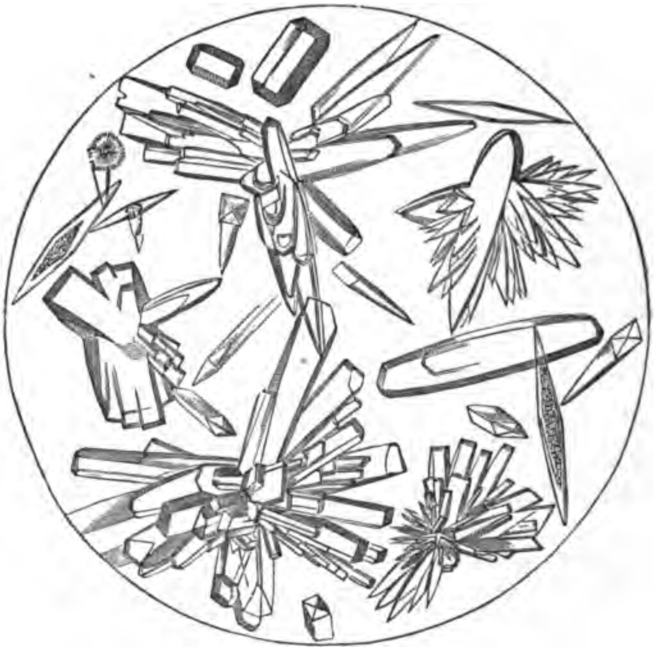
The crystals of creatinine thus possess, for the most part, a bi-convex or navicular shape, which is most distinctive.

In the engraving (Fig. 29) the chief modifications in the form of the crystals of creatinine are exhibited; the crystals, some of them reduced in size, are selected from the figures of creatinine, contained in the Atlas of MM. Robin and Verdeil.

The great transparence of the crystals of creatinine, the absence of that brilliant nacreous tint observed on the crystals of creatine, prevents our confounding these two substances, even when the forms of the crystals are at all similar.

"In those cases in which the crystals are square, and the solids are rectangular prisms, which are rare, it is sufficient to take a drop of liquid, to place it upon a plate of glass, and to allow the water to evaporate. There then forms irregular groups of crystals, which stand out upon the glass, and amongst the crystalline varieties which one meets with, there exists always a certain quantity of *navicular* forms, or lamellæ, more or less abundant, which are fusiform. They represent exactly the form of a bi-convex lens. This fact is altogether special to creatinine." (Robin and Verdeil.)

Fig. 28.



Crystals of Creatinine from a few drops of human urine, evaporated on a slip of glass. (Magnified 220 diameters.) May, 1853.

The last particulars respecting the crystals of creatinine which require to be noticed is their colour. When viewed by reflected light the crystals are white and brilliant, but when seen as transparent objects, they are of a brownish tint. By this character, therefore, they are further distinguished from creatine.

Source and Origin of Creatinine.

Creatinine, like creatine, urea, and uric acid, is strictly an excrementitious substance.

Like creatine, also, it doubtless results from the disintegration of the muscular tissue.

Further, from the readiness with which creatine is transformed into creatinine under slight chemical and physical agencies, as well as from the excess of creatinine in the urine over creatine, there is good reason for believing that much of the creatinine of the urine is derived from the transformation in its passage through the system of creatine into creatinine. This transformation doubtless occurs in the urine after it has been voided, and has become putrid, in which state it yields no creatine, but only creatinine.

Pathology and Treatment of Excess of Creatinine.

The treatment of creatinine being the same as that of creatine, the remarks already made in a previous article, in regard to the Pathology and

Treatment of Excess of Creatine are equally applicable to that of creatinine.

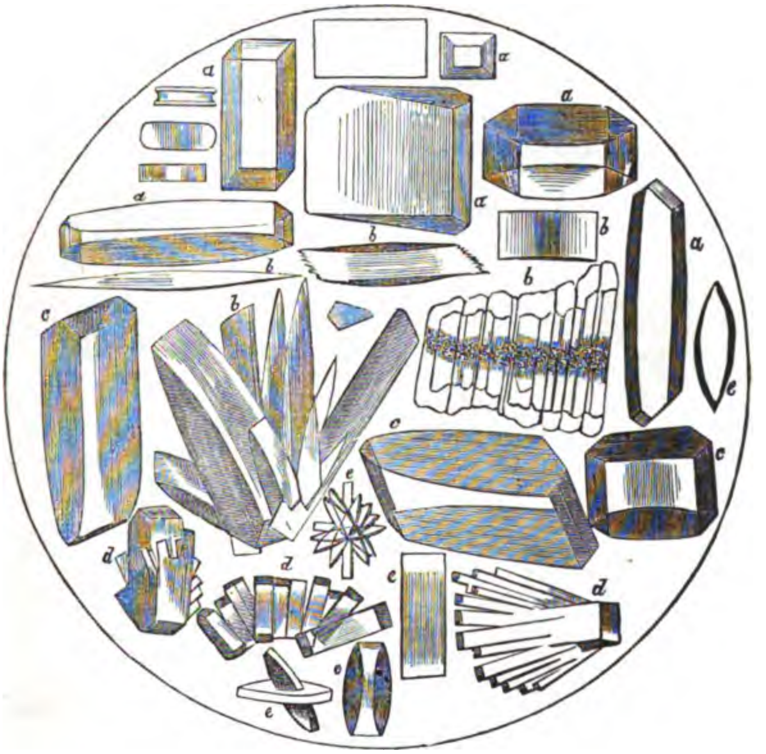
CYSTINE.

Cystine, originally called by its discoverer, Wallaston, *cystic oxide*, has as yet been found only in the kidneys, bladder, and urine, forming in the former situations, granules and calculi, and in the urine occurring chiefly as white or fawn coloured sand-like and crystaline deposits. It is not one of the normal constituents of the urine, but is strictly pathological.

Chemical Characters of Cystine.

Cystine occurs nearly always in the crystalline form; it is devoid of colour or taste, is insoluble in water and alcohol; it dissolves in the mineral and oxalic acids, forming combinations which are for the most part crystallizable, but it does not combine with citric, tartaric, or acetic acids; it is also dissolved freely by the fixed alkalies and their carbonates. It is soluble in ammonia, from which it is again deposited unchanged, on the evaporation of the volatile alkali; but it is insoluble in carbonate of ammonia, hence it is best precipitated from its acid solutions by that re-agent, and from its alkaline solutions by acetic acid. It burns with a bluish-green flame, giving rise to a very peculiar odour: submitted to dry distillation, it yields ammonia, and developes a very offensive smell; it leaves a bulky and porous ash; boiled with alkalies ammonia is first formed, and subsequently a gas, which, when ignited, burns with a blue flame.

FIG. 29.



Crystals of CREATININE. *a a*, deposited from *aqueous* solution. *b b*, from *alcoholic* solution. *c c*, from the very acid *urine of the pig*, evaporated. *d d*, from the flesh of the *horse*. *e e*, from that of the *ox*.

The following is the elementary composition of cystine:—

Carbon	6 atoms	30·000
Hydrogen	6 "	5·000
Nitrogen	1 "	11·666
Sulphur	2 "	26.667
Oxygen	4 "	26·667
		100·000

Cystine is distinguished with great ease by its microscopical characters, by its solubility both in alkalies and mineral acids, and by the odour which it developes when submitted to dry distillation, or when burned.

Liebig has given the following directions for the detection of cystine:—The potash extract of the substance suspected to contain the cystine is to be decomposed with a solution of oxide of lead in caustic potash; heat is to be applied, when, if cystine be present, a precipitation of sulphite of lead will occur. It should be recollected that the same result will ensue with any other body containing sulphur, as albumen, mucus, &c., although these substances contain at most but 2% of sulphur, and cystine, 25%.

Microscopical Characters of Cystine.

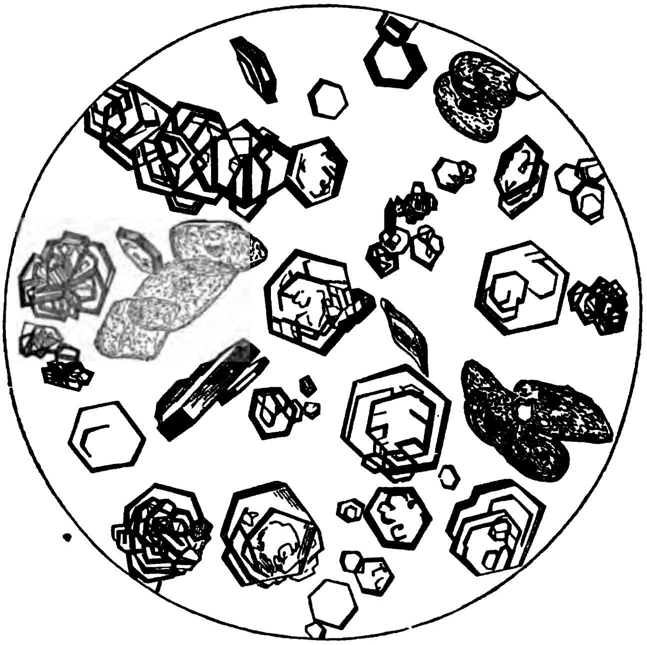
The microscopical characters of cystine are peculiarly distinctive; a mere glance at this deposit under the microscope is sufficient for its identification. The ordinary form in which the crystals occur is in thin regularly-shaped hexagonal plates, these being often composed of one larger crystal, splitting up into several smaller hexagonal crystals. Sometimes a number of hexagonal plates partially coalesce, forming glomeruli; occasionally long four-sided prisms are met with, the extremities of which are truncate. These long prismatic crystals are well figured by MM. Robin and Verdeil; they occur chiefly amongst the crystals deposited from the ammoniacal solution of cystine.

Another characteristic of the crystals of cystine is derived from the manner in which they reflect the light transmitted from the mirror of the microscope; when this traverses the face of the crystals directly opposed to it, it causes them to appear particularly clear and brilliant, but the light is altogether excluded from those faces or surfaces on which it falls obliquely, and hence they appear as black or nearly black. This appearance is observed particularly in the thicker hexagonal plates.

Characters of Urine depositing Cystine.

Urine depositing cystine is usually of a pale colour, frequently possessing, according to Bird, an oily appearance, like diabetic urine. Its specific gravity is usually below the average, although one case has been met, in which the urine, that of a child, had a specific gravity of 1·030. The quantity passed is often considerable, and it is ordinarily either neutral or feebly acid, speedily becoming alkaline by keeping. Bird describes its odour as peculiar, bearing in general a close resemblance to that of sweetbriar. Less frequently, the odour is fœtid, like putrid cabbage, owing to the partial decomposition of the cystine, and the escape of sulphuretted hydrogen. In these cases, the colour of the urine changes from pale yellow to apple green. Kept a short time, cystic urine becomes covered with a greasy looking pellicle, consisting of a mixture of crystals of cystine and triple phosphate, in warm weather, according to Bird, frequently undergoing a kind of viscous fermentation, bubbles of gas being evolved, and the whole becoming ropy and rather viscid.

FIG. 30.



Crystals of CYSTINE, magnified 230 diameters. Drawing made April, 1853, from urine furnished by Dr. Mott.

The crystals of cystine are present in the urine, rendering it somewhat turbid at the moment it is passed; but a small quantity remains in solution, and is precipitated by the addition of acetic acid.

The deposit is usually white or pale fawn-colored, and often copious. It is sometimes pure and unmixed, but not unfrequently mixed with urates, triple phosphate, phosphate and oxalite of lime. It will sometimes be found to vanish from the urine for days together, but crystals of cystine are even then precipitated by acetic acid. The urea and uric acid are usually much diminished.

The following analyses of cystine urine are by Golding Bird:—

Boy.

Water,	974·444
Solids,	25·556
Urea, impure,	5·7
Uric acid,	·016
Cystine,	·340
Extract containing fixed salts,	19·5

Strumous Child with Pneunomia.

Fluid ounce of urine.

Uric acid,	0·2
Urea,	3·7
Cystine, Creatinine, Extractives,	8·1
Earthy phosphates,	0·2
Alkaline phosphates and sulphates and chlorine of sodium,	2.8
	15.

"*Pathological Origin and Indications of Cystine.*"

Under the above heading we met with, in Bird's "Urinary Deposits," the following remarks in regard to the pathology of cystine:—

"This curious substance is, in all probability, a derivative of albumen, or of structures into which it enters, and appears to be the result of the derangement of the secondary assimilative processes, essentially connected with the excessive elimination of sulphur, every ounce of cystine containing more than two drachms of this element. A question may be entertained whether cystine may not be a metamorphic form of the normal sulphur extractive of the urine, or the condition assumed by this extractive when an excess of sulphur is eliminated. From an examination of its chemical composition, there appears no difficulty in explaining the origin of cystine by supposing that it is formed by those elements of our tissues, which would normally have been converted into urea or uric acid, in consequence of the presence of an excess of sulphur, probably connected essentially with a scrofulous diathesis."

A very remarkable circumstance connected with the history of cystine in the urine is its *hereditary* character; it has been found in the urine of several members of the same family, and nearly at the same time. In one instance it has been traced through three generations.

Cystine deposits have been particularly observed to occur in connexion with a *scrofulous* diathesis, a circumstance which appears to explain its hereditary tendency.

Again, there is some reason for believing that its presence, in some instances, is associated with *fatty liver*; the approximation which exists between cystine and taurine, into which bile is partly converted by digestion with hydrochloric acid, gives much probability to this view, as does also the observation of Dr. Prout, who has seen fatty matter mixed with the cystine urine, and who himself was hence led to suspect that the deposit was associated with fatty degeneration of the liver. If this view were correct, the excretion of cystine would serve to compensate for deficient elimination of sulphur by the liver.

Mr. Luke, in a case of cystine calculus, met with extensive disorganization of the kidneys.

Another constitutional affection in which cystine is very apt to occur is *chlorosis*, as Dr. Shearman has shown; in two of the cases described by that physician, the patients were sisters.

The occurrence of cystine in connexion with hepatic degeneration and in chlorosis appears to show that there is a general deficiency of oxidation in these cases.

The relative elementary composition of cystine and taurine are exhibited in the following formula:—

	Cystine.	Taurine.
Carbon,	30·000	19·2
Hydrogen,	5·000	5·6
Nitrogen,	11·000	11·2
Oxygen,	26·667	38·4
Sulphur,	26·667	25·6

It is in infants and adults chiefly that deposits of cystine occur, and scarcely ever in the aged.

Treatment of Deposits of Cystine.

Before proceeding to treat cases of cystine deposit correctly, we must determine the nature of the constitutional cause or condition upon which the deposit depends. If it be associated with the *scrofulous diathesis*, the treatment must be directed mainly to this and to the improvement of the constitution. Iron, especially the milder preparations, as the citrate, tartrate, and iodide of iron, will be found invaluable, attention being at the same time paid to the general health, and especially to the condition of the functions of digestion and assimilation, as by tonics, bathing or sponging of the body, exercise, and light and nutritious diet.

If the *liver* be at fault, we must particularly attend to and watch that organ.

If the deposit be associated with *chlorosis*, here again iron will be most serviceable.

With the view of improving the constitutional powers, and at the same time of dissolving the deposit, Dr. Prout has recommended the persistent use of nitro-hydrochloric acid, of the results of the exhibition of which, however, Dr. Golding Bird has not spoken very favourably.

The administration of sulphur has no effect in producing a deposit of cystine.

Whatever treatment be adopted must be perseveringly followed out, for, since in these cases we have to treat an hereditary disease, recovery cannot be otherwise than a work of time.

Lastly, it should be stated that cystine deposits have been observed in some cases to continue for years without seriously affecting the health. The great danger to be apprehended in such cases is the occurrence of stone.

I now propose to bring these lectures to a conclusion for the present, resuming them at a future period. In the next articles I shall treat more particularly of sugar, hippuric, oxalic, lactic, phosphoric, and sulphuric acids, in the urine. The suspension in the publication of the lectures will afford me the opportunity of devoting more time to the preparation of the work already announced, entitled, "Illustrations of Urinary Pathology."

Wimpole-street, Cavendish-square, 1858.

Clinical Lecture
ON
INJURIES OF THE HEAD.

Delivered at St. Thomas's Hospital.

By SAMUEL SOLLY, Esq., F.R.S.,

SURGEON TO THE HOSPITAL.

Fracture of the Base of the Skull, with Symptoms of Extravasation; Paralysis; Recovery.

Gentlemen,—Fractures of the base of the skull are not unfrequent in a large, busy, crowded labouring city, like London, but the recoveries are few and far between. When I say recoveries from this injury, I speak advisedly. I think we are as justified in asserting, in those cases where the symptoms are very marked, that the skull is positively fractured, as we are when we see the skull bared before us in the dead-house.

The following case will, I think, convince you that a fractured base is not always fatal.

Bartholomew M'C——, aged thirty-nine, ship-porter, admitted into Abraham's ward, Sep. 23, 1857. While raising some timber from a lighter into a ship, one piece fell back and struck him down in the barge below. In this case, the blow coming from above must have struck the vertex of the head. When picked up, he was senseless. On admission, there was bleeding from the nose and from both ears, but no serum. Pulse 92, labouring; breathing stertorous; pupils—or, at least, the left, for the ecchymosis and swelling of the right eyelid prevented the pupil of that eye being observed—moderately dilated and insensible. Head to be shaved and an ice-bag applied. To take eight grains of calomel in powder, immediately, and two grains in two hours. He remained insensible during the rest of the day, and lay quiet, occasionally moaning; twice he has been sick. The bleeding from the right ear continued up to the evening. The bowels not being opened, he had a common enema, after which they were twice moved during the night.

Sep. 24th.—During the day he continued much in the same condition; pulse 96, full. Towards evening he became more conscious, and referred to his head as the seat of pain; breathing became natural though still heavy. Mr. Solly, finding the pulse full and hard, ordered forty leeches to the scalp, which had the effect of softening the pulse, but did not diminish it in volume.

25th.—Has been sleeping the whole day; breathing heavy; when questioned he pointed to the vertex and forehead as the principal seats of pain.

26th.—Less drowsy, but dislikes being disturbed; a good deal of hesitation in his speech; (it was afterwards ascertained that this was usual); there is considerable in-turning of the right eye, and its pupil is always more dilated and less responsive to light than that of the left.

This inward squint has been the result of paralysis of the abductor oculi, through pressure on the sixth pair of nerves; the dilated pupil of this eye is to be considered as the result of pressure on the optic nerve, or more or less palsy of the retina.

28th.—Being quite under the influence of mercury, it was discontinued, and an alum gargle ordered. This man owes his recovery, I believe, to the rapidity with which he was brought under the influence of mercury. Bowels open.

29th.—Mouth very sore. Ordered, a chlorinated soda gargle.

30th.—Complaining of accession of pain in the head and across the forehead; hot scalp; a good deal of pyrexia. Thirty leeches were ordered; these did good service, but it was thought necessary to repeat them on the 2nd.

The continued heat of head was to my mind an indication of the persistence of inflammation, and hence my reason for calling in the aid of my black allies, and the niggers did good service to the state.

Oct. 5th.—Since the last application of the leeches he has progressed very favourably. Continues to complain of pain in both supra-orbitar regions, particularly the right; tongue pale but not coated; bowels open; pulse tranquil; appetite good, and he asks for a better diet, but he was kept on milk, of which he was to have one pint extra.

I believe that the slightest improvement in this man's diet would have again roused the inflammatory action which the leeches had subdued. Our London patients do not bear much pulling down, and very soon require a nourishing diet, or typhoid fever attacks them; or erysipelas, in cases of scalp wounds; or, as you have lately seen, that pleasant complication in a case of erysipelas, delirium tremens. Still, in this case I felt the necessity of a low diet, and therefore adhered to the milk.

8th.—Pupils both act on admission of light, but the right remains permanently the more dilated, and vision with it is much less distinct. Paralysis of the portio dura on the left side; food collects between that cheek and gum. When told to smile it is all on the right side; when told to puff out his cheeks the wind escapes at the left corner of the mouth, and the cheek flaps passively; there is total want of expression on that side. He cannot close the left eyelids, and there is always some ptosis of the upper lid, which may depend on paralysis of the third, or on want of tone in the orbicularis from the paralysis of the facial. He can project his tongue quite straight, and turn it to either side indifferently. He complains of numbness in the distribution of the infraorbitar division of the fifth. He has also quite lost all taste. To have cantharides blister to the temples; mercury ointment afterwards.

11th.—The application of the mercury to the blistered surfaces has made no impression on the pain in the temple, nor improved the sight of the right eye.

18th.—Feverish; tongue brown and dry; hot skin; headache. Effervescing potash mixture, one ounce and a half every four hours.

19th.—Powdered rhubarb and mercury, one scruple, to be taken directly. Less feverish; tongue clearer, moist. He always now wears a shade, which he says helps his vision. When he closes his left eye he feels a giddiness; when he uses both eyes, a fog obscures his vision. He complains of a difficulty of swallowing, unless it be liquids or solids that are well "greased," as he expresses it; but he has recovered taste.

Nov. 5th.—Complains of accession of pain in the head; some pyrexia. He was ordered twelve leeches, with linseed poultice.

6th.—Much better.

7th.—Mixture of bichloride of mercury, one ounce three times a day.

20th.—Able to get up and walk about, though with some feeling of vertigo. Pupils act equally; vision of the right still much less clear than the left. Paralysis of left facial lessened; no ptosis; more expression; numbness less in distribution of infra-orbitar; now he experiences frequent tingling sensations in the course of the same nerve. Inturning of the right eye persists. Swallowing much better. Complains of frequent lacrymation; when he endeavours to fix his attention on any object, it increases the fog over his vision; when he shuts either eye he can see better with the other, though best always with the left; when he shuts the left eye he cannot point with his finger straight to any object; always goes wide of the mark; any effort makes him feel a little giddy. He says that all his face feels different from what it used to feel before the accident. General health very good. Still kept on low diet, much against his inclination.

A few days subsequent to this date he was presented, at his own desire, the only paralyses remaining being of the left facial, of the right abducens, and of the right optic. When dismissed, the greatest caution was enjoined upon him as to diet and regimen.

In this case the number of nerves which were paralyzed indicated the great amount of injury and the extent of the extravasation.

In contrast to the above case, and in order to point out forcibly the difficulty which sometimes occurs in detecting fracture of the base, and still more the difficulty of persuading the patient and his friends of the serious nature of the injury, I shall detail briefly a case which came before me in my private practice. The time will come when you will be surprised by the incredulity of non-professional men as to the danger to be apprehended in a case of injury of the head, in which the symptoms are not severe in the first instance. If the consciousness of the sufferer is not entirely obliterated, or if obliterated for a short time is soon recovered, they think you are exaggerating the danger, and if they are low-minded, vulgar people, they will even suspect that you want to make the most of the case; and often the poor patient himself, as soon as the power of thought returns, feeling weak and depressed, will accuse his medical attendants of unnecessary caution, and say decidedly, as in the instance now to be related, that all he wants is good nourishing diet, and the same amount of wine, &c., that he has been accustomed to. We, of course, meet with these fancies in hospital practice, but they are more easily managed than in private. But neither in public or in private, if you are clear, as you ought to be, in your conviction of the true pathology of the injury, yield your opinion, or alter your practice. It is far better to give up the case than agree to a line of treatment which you do not approve.

On the 20th of May, 1856, D. S—— was thrown from his horse with great violence, as the animal was galloping at full speed. He pitched on the right side of his head, the skin of which was grazed. There were bruises on the whole of the right side of the neck, limbs, and body. He bled freely from the ear on that side, making, I was told, a pool of blood in the road. I learnt from a man who saw the accident, and picked him up, that he was then quite unconscious. But he soon partially recovered his senses; for when the medical man of the neighbourhood, Mr. Chapman, saw him, about ten minutes after the occurrence of the accident, he was able to answer a few words, though not very distinctly or continuously, in reply to his questions. So slight at this time were the symptoms of severe injury to the head, that Mr. Chapman thought him well enough to be removed from Norwood, in a fly, to his residence in London. Mr. Chapman's judgment might, perhaps, have been a little biassed by a conscientious feeling of not wishing to retain D. S—— as his patient in a country inn, away from the comforts of his own home.

I saw him first in London, about six hours after the receipt of the injury, in the presence of Mr. Chapman, who had kindly accompanied him to town. From this gentleman I learnt that when he first saw the patient the pupils of both eyes were natural in appearance, slightly but equally dilated, and that they contracted normally to the influence of light; that the pulse was feeble and regular, and the breathing natural. He said that it was like a case of simple concussion. When I saw him he was partially conscious, though dull; he at once asked who I was, and, though he did not recognise my face, which was not unknown to him, he evidently remembered my name. We ordered him a purgative of calomel and rhubarb, to be followed by a senna draught in the morning; these cleared the bowels well.

I shall not detain you with the daily notes of this case, but merely mention that the cerebral symptoms did not assume any serious character until twenty-four hours previous to his death, which took place on the fourteenth day from the date of the injury. At each visit he was quite conscious, though rather lethargic, and answered all questions rationally. He complained that we did not allow him enough to eat, and told his usual medical attendant that all he wanted was his usual diet, and that if we would allow him that he would soon be quite well. The symptoms which I did not like, and which induced me after each visit to give a very guarded opinion as to his progress, were, a continued though slightly-increased beat in the head; a slightly-dilated pupil of the left eye; a sluggish and peevish manner; and his complaint that he was not free from headache, though he said it was nothing to signify; he had had an injury to the eye and slight squinting from a former injury, so that this symptom was not thought of much importance. The accident occurred on a Tuesday, and he spoke but little, except in answer to questions from his nurse or medical attendant. He answered slowly, but never incorrectly; he seemed to require time to collect his thoughts. But on the Friday he talked to his brother, who was his partner, perfectly rationally about business, and from this time his intelligence improved until thirty-six hours before his death.

On the Thursday week following the accident—that is, on the ninth day, he seemed so well that his brother, who up to that time had slept every night at his house, went home. It was on this day that, in a consultation with Sir B. Brodie and Mr. Headland, we yielded to his repeated solicitations that he might be allowed to sit up a little during the course of the day; we agreed to his doing so in the arm-chair for an hour the next day, but that he was not to see any of his numerous friends, who called in great numbers to inquire after him. All this precaution he thought very absurd, showing how well he felt himself.

The following morning, at half-past eight, he got up, partially dressed himself, went into his sitting-room, got out his geological hammer, and began to work at some of his fossils. He had not been occupied in this way above a quarter of an hour before he became drowsy, and soon comatose, and was a corpse in about thirty-six hours from the time of his thus leaving his bed and exercising himself in this imprudent manner.

After his death, I heard that on every occasion his bowels acted he got out of bed and went to the watercloset up stairs. I mention this fact, because it certainly never did occur to me during my attendance that such a thing would be allowed, for he had an excellent nurse, who I thought knew her business. It has, however, been a warning to me for the future to ascertain how such matters are provided for, and to guard against any such imprudence.

If it is wrong to permit a man in a state of delirium, having fractured either arm or leg, to leave his bed, for no man in his senses would do such a thing, it is still more dangerous to permit a man who has fractured his skull to move about as if nothing was the matter. I know that in many such cases, when patients are tolerably conscious, and when they are obstinate and self-opiniated, it is extremely difficult to manage them; but you must not hesitate to speak the truth, and tell your patient distinctly, that his skull is fractured. This may seem harsh, but it is really kindness, if by it, and by that alone, you can control your patient. .

Mr. Hilton, in his valuable lectures on "Fractures of the Base of the Skull," has forcibly pointed out the importance of keeping the head still, and not allowing your patient to assume the upright posture until five or six weeks have elapsed, and the injury is repaired. He dwells upon it especially in reference to the rupture which takes place in the water-bed on which the brain rests in a normal state. In fracture of the base of the skull, extending through the petrous portion of the temporal bone, the cerebro-spinal fluid escapes at the external ear, and this flow is itself an indication of the severity of the injury, but its absence is no proof of the absence of fracture. But to return to the management of an unruly patient. When either you have ample proof of fracture of the skull or only suspect it, as in the case just related, I again wish to impress upon you the absolute necessity of keeping your patient as quietly and unintermittingly in bed as if his leg was broken, and that you are justified in telling him plainly, if such an extreme measure is necessary to attain your object, that his skull is fractured, and that absolute rest is necessary to preserve his life.

A post-mortem examination in this case revealed the frightful amount of mishief which had been inflicted on this poor fellow's skull and brain. External to the skull there was a large ecchymosed spot over the temporal muscle on the right side, and, corresponding with this, there was a large coagulum of blood between the bone and dura mater, extending downwards as low as the petrous portion of the temporal. By the removal of the calvarium, the dura mater on the left side, corresponding with the superior posterior angle of the parietal, exhibited unmistakable indications of blood extravasated beneath by its purple hue and bulging surface. The clot which produced this extended from the base of the brain to the vertex. On removing the brain, we found the lower part of the left middle lobe superficially lacerated, discoloured by blood, and slightly softened; there was also superficial laceration of the under part of the left anterior lobe, with an accompanying sanguineous infiltration. The remainder of the brain was firm and healthy; no suppuration nor other morbid appearance. There was a fracture of the skull, extending from the upper part of the squamous plate of the right temporal bone down wards through its petrous portion, and thence across the occipital, but not quite reaching the foramen magnum.

From this account, you will perceive that the laceration of the brain was on the opposite side to the fracture; it was occasioned, therefore, by the *contre coup.* This laceration and a certain amount of extravasation must have been contemporaneous with the injury; but I doubt if the whole amount of coagulum found after death was poured out at the time of the accident, but that this second flow of blood followed his resuming his favourite occupation with his geological hammer. It is not, however, probable that, with this amount of injury to the brain, any amount of rest or judicious antiphlogistic treatment could have averted the fatal result; but the whole course of the case, with its post-mortem revelations, will show how extremely careful—aye, and obstinate, you must be in the treatment of any injury of the head, where there is even the slightest ground for suspecting fracture of the base.

Lettsomian Lectures.

DELIVERED BEFORE

THE MEDICAL SOCIETY OF LONDON, MARCH THE 17TH, 1858.

BY VICTOR DE MÉRIC, ESQ.,

SURGEON TO THE ROYAL FREE HOSPITAL AND TO THE GERMAN HOSPITAL, DALSTON.

LECTURE I.

ON THE UNICITY OR DUALITY OF THE VIRUS IN SYPHILIS.

Importance of the study of syphilis.—Specialism—Diversity of opinions on syphilis—The origin of the disease.—Syphilis in modern times.—Existence of a syphilitic virus.—Ricord's unicity.—Proposed duality.—Sketches of the doctrines of Hunter, Abernethy, Carmichael, and Wallace, as bearing on the plurality of the virus.—Bassereau's dualty.—Ricord's opinion on a duality of poisons.—Present state of the question.

Mr. President and Gentlemen,—I beg your permission to offer a few observations on some points of interest bearing upon the pathology and treatment of the syphilitic disease; and as considerations respecting this malady have not yet been brought forward from this chair, I shall have the advantage of novelty as regards the subject. It will hardly seem strange that a conference on surgery should hinge upon the syphilitic disease; for surgeons now-a-days, when coping with syphilis, are called upon to do a little more than to promote the healing of sores, and to gouge away carious bone. They are, on the contrary, expected to study the essence of the malady, trace it from its origin, examine its mode of propagation, its varied forms and aspects; observe its progress and the influence of remedies upon its manifestations, distinguish it from other diseases, watch over relapses, and devise the most efficacious and least dangerous therapeutical measures.

To do all this, it is indispensable that the inquirer be a surgeon in the fullest acceptation of the word; for the only way of mastering any surgical disease is to descend from the general knowledge of all medical and surgical affections to the particular malady to which especial attention is bestowed. General principles, and the close study of pathological laws, will allow the observer to move with judgment and ease in the circle which he has traced for himself: and he is then ever ready to apply his information and manual skill to improvements and sound practice in the particular branch to which he is confining himself. Such a surgeon need not be afraid of being considered a *specialist*, particularly if he succeed in avoiding some of the quicksands of specialism. Amongst these is the propensity of clothing many unkindred affections in the special garb; and of not paying sufficient respect to the opinion of men who, laying no pretension to specialism, are nevertheless entitled by their knowledge and experience to judge for themselves.

I suspect that we all may usefully bestow a portion of our time to the study of syphilis. Amongst the reasons for holding this opinion I may give the two following: the universal manner in which the disease is spread amongst the community, and the variety of methods employed by competent practitioners in combating the malady.

Before the audience I have the honour of addressing, it would be superfluous to dwell on the disastrous influence this fell disease has exercised upon mankind for the last three centuries; how it has poisoned the very springs of life, fearfully visiting both the innocent and the guilty; how aggravated and loathsome it was rendered by illiberal measures and imperfect treatment; how rapidly it destroys some individuals; how obstinately it fastens for a considerably number of years upon others; and how terribly, even in modern times, it has been known to break out and defy all control.

All these unfortunate circumstances are well known; nor are my hearers less aware of the diversities of methods employed in the treatment of the disease, all these methods being based upon deep conviction and candidly avowed theoretical views. Amongst ourselves, at this moment, there may be some who dread secondary symptoms as much after gonorrhœa as chancre, and act in consequence; some may look upon every chancre, as Hunter did, as capable of exciting constitutional syphilis; some may suppose that the poison, after contagion, is immediately taken up into the organism, and that the primary sore is in consequence of general contamination; some may reject, as far as transmissibility is concerned, the distinction between primary and secondary symptoms; some may think mercury a beneficial agent, others a mischievous drug; some may believe that constitutional syphilis attacks a man but once in his life, others that the infection may be several times repeated.

So much difference of opinion and so much uncertainty overhangs hardly any other disease; I need, therefore, not apologize for endeavouring to throw a faint glimpse of light on some points of this very intricate subject.

And now that we are fairly launched, I would fain comply with the wish expressed by Dr. Headland, my immediate predecessor in this chair. My colleague thought I might, perhaps, venture to offer a sketch of the origin of the disease; but such an attempt would merely lead you over often-trodden ground, without the benefit of arriving at a satisfactory conclusion. All I would ask permission to say on the subject is this: It is perfectly certain that previous to the general spread of the disease in 1493–95, no ancient or mediæval writer had given a description of the complaint, as seen and depicted by Joseph Grundbeck, Benedictus, and Leonicenus, who wrote in 1496–97, these authors being the first who published an account of the malady. Such is not the case with small-pox, the essential fevers, hydrophobia, and other complaints, which are mentioned in the remotest records. We are, therefore, led to believe that at the end of the fifteenth century the morbus pustularum, as syphilis was then called, appeared for the first time; and we are inclined to reject the ancient origin supported by some writers. Shall we give credit to the American story so eloquently and learnedly defended by Astruc? I fear not. Had the companions of Columbus brought the disease with them, they would have propagated the complaint, not at the siege of Naples, but in Portugal, where they landed. Was the disease generated by filth amongst the Jews and Moors, driven from Spain into Italy, where they encamped in the vicinity of Rome, and were decimated by the Marannic* fever, as maintained by Sanchez? Were the Yaws imported from Africa into Italy, where they became the origin of syphilis, as has been supposed by Swediaur? None of these statements are sufficiently supported by historical coincidences and documents. There is, however, one way of raising a corner of the thick veil which obscures the subject—namely, by taking into consideration the appearance of glanders amongst horses at the very siege of Naples so frequently cited. Now it was not known at the period alluded to, that this latter disease was communicable from the horse to man; and it has since been suspected that some of the loose female characters already labouring under simple ulceration, and hovering around armies, might have been infected by an individual suffering from glanders, or having about him some infectious secretion, originating from a diseased horse. A mixture of the poison of glanders with the unhealthy and decomposing secretions of dissolute females may have given rise to the dreadful malady which has for centuries undermined the health of generation after generation. Proof there is none; but a tolerable share of probability.

I may not, on the present occasion, follow the ravages of the disease through the length and breadth of the world, trace its effects in different climates, describe its decrease and occasional exacerbations, compare it with the Sibbens of Scotland, the Yaws of the West Indies, and the Black Disease of Canada; but I shall just stop to inquire what aspect syphilis presents in this country, in our own refined state of society.

We now meet in hospital and private practice with all the symptoms of syphilis which have been described by the writers of the sixteenth century; nay, we are more complete than our forefathers, as may be learned by the works of Brassavolus Fallopius, Fracastorius, and Fernelius; for it is only by degrees, and by successive authors, that loss of hair, ulcers of the tonsils, affections of the bones and of the testes, were mentioned. These manifestations of syphilis either did not appear at once, or their relation with the syphilitic poison was only gradually discovered. Surgeons now-a-days, however, see before them a considerable number of chancres, of which a rather large proportion, especially in the labouring classes, become phagedænic. We frequently observe gangrene of the prepuce and glans, and spreading buboes; we have to cope with destruction of the soft palate and large in-intractable secondary or tertiary ulcers; we are grieved at seeing, but too often, the vomer and and hard palate attacked; and we meet with carious skulls, which now, as of yore, lead the sufferer to the grave. The picture is not overdrawn, and I am sorry to say that in the space of fifteen years, I have individually seen a very large proportion of fearful pustular eruptions, extensive tubercular ulcerations, destruction of the penis by gangrene, phagedænic ulceration of the greater portion of the abdomen or the back; and I have observed some of our fair delinquents, once adorned by freshness and youth, turned into objects of disgust and commiseration. Let us, therefore, not relent in our contest with this leviathan destroyer.

I need hardly mention that nomenclature is a matter of some importance, both in scientific investigations and in practice. From a desire, then, of being clearly understood, I shall comprise, under the term syphilis (a word we owe to Fracastorius's poetic efforts, and the derivation of which is not settled), the primary, successive, and constitutional symptoms which are generally included when syphilis is mentioned. But I must say, though I am, perhaps, forestalling a little, that there will eventually be advantage in restricting the term to such symptoms as result from the contamination of the organism at large. We all know that a man may have had a chancre and a suppurating bubo, and remain for the rest of his life perfectly free from any taint whatever. Such an individual should not be said to have suffered from *syphilis;* his frame is not infected, he has simply had a venereal ulceration, followed by a glandular complication. The words *chancre* and *syphilis* might, then, advantageously be reserved for the more serious disease, and it would at once be plain that syphilis is to be classed with other blood diseases, as cancer and scrofula.

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* These unfortunate people were driven from Spain upon their refusal to embrace the Christian faith, and were stigmatized by the term *Marranes* (pigs).

The necessity for such a distinction will become plain when we come to consider the question of unity or duality of the syphilitic virus, the principal object of the inquiry which we are now instituting. This inquiry may, however, appear idle to some practitioners, as we have it stated in certain books that the poison of syphilis may be generated spontaneously. It has also been maintained that frequent promiscuous intercourse, coupled with uncleanly habits, may cause the development of syphilitic ulcerations. If notions of this kind were to gain ground, investigations respecting the intimate nature of the virus, its unicity, duality, or plurality, might well be given up, for spontaneous generation, problematical as it is in natural science, is completely incompatible with the conception we form of a virus or morbid poison. In establishing a comparison between the modes in which small-pox and syphilis (two very frequently-observed morbid poisons) may be artificially propagated, we shall rest analogically satisfied that the purulent matter at the point of the syphilitic lancet contains a virus as well as the matter carried by the variolous blade. Analogy will aid us just as efficiently if we look at glanders and rabies, and we cannot consistently admit a virus for these diseases, and refuse it to syphilis. Nay, we concede a special virus for scarlet fever, influenza, rubeola, and typhus, although we are aware that it must be volatile, and unamenable to the senses by any vehicle; so we may, *à fortiori*, look upon the syphilitic virus as having a *bonâ fide* existence.

Nor does the analogy between syphilis and other contagious diseases rest here, for it is extremely probable that the organism is insusceptible of two syphilitic infections. A patient who has suffered from generalized syphilis is just as unlikely to see an indurated chancre take root upon any part of his body as an individual who has had small-pox to see a variolous pustule luxuriate by inoculation upon his frame. It is not strictly known, however, *how long* the immunity lasts respecting either of these diseases, or respecting the protecting effect of the vaccine virus, but I would venture to say, that the syphilitic influence is, from some facts observed, *more likely* to endure than that of either variola or vaccinia. This is extremely probable, because patients have been known to present constitutional symptoms of syphilis many years after the primary infection, a long lapse of time having intervened, during which the morbid disposition lay dormant. We have no such test regarding the two diseases just named; on the contrary, we do know that the vaccine virus will take a second time after the interval of a certain number of years. I wish to be understood as not denying *in toto* the possibility of a second infection on an individual who has passed through the phases of constitutional syphilis; but it may be affirmed that no reliable cases of such infection are on record; nor have experiments satisfactorily shown that the pus taken from a hard chancre will produce a similar sore upon an individual whose organism had previously been tainted by syphilis.

This question is intimately connected with another very important one—viz., whether the disease *ever completely* leaves the organism which has once been infected. Ricord is inclined to think that something is always left, and that the disease is never entirely eradicated; but neither he nor other syphilologists are quite certain on that head; and no surer proof could be obtained that syphilis can be completely eradicated than the production of a patient who, after having had symptoms of generalized syphilis, and undergone an appropriate treatment, were some years afterwards to contract a hard chancre. This circumstance would incontestably show that his blood had been perfectly freed from the virus, he having again become susceptible of its influence. I need hardly say that *soft chancres* will very easily spring up on such individuals, but the hard does not.

A very interesting illustration of insusceptibility is frequently afforded in practice. I often see patients who present a hard chancre behind the corona. This kind of sore, secretes but very little pus in ordinary circumstances; but uncleanly habits and negligence excite irritation and inflammation, and pus is then pretty largely secreted. The groove behind the corona becomes inoculated, wreaths of chancres spring up, but none take on induration.

But let us return to the *virus*, that alkaloid, as it were, which has not as yet been isolated from its vehicle. It is plain that we know it merely from its effects; and that its essential nature is still a matter of conjecture. Chemistry and the microscope have done their best to clear the mystery, but to no purpose. I have myself made a few efforts in that direction, kindly assisted by my friend, Mr. Jabez Hogg. We possess very delicate drawings of the microscopical appearances of various purulent secretions; but we have not hitherto obtained the reward of our industry. I am not, however, inclined to relax; and hope I may succeed a little better than some writers—such as Didier, who, in 1710, contended that the virus was composed of little worms; or, as Donnè, who more recently laid great stress on the vibrio-lincola found in the pus; or as M. Castano, who maintained, in 1856, that the virus consists of a parasitical fungus.

The essence of the poison is, to this day, unknown; but the last few years have, nevertheless, worked a complete revolution respecting this same virus; and it is in France that this revolution, like many others, has occurred. It consists in dethroning the monarchial government of one virus, and forcing it to share its power with another morbid poison. The unicity of the virus is attacked as despotic; and the sceptre is henceforth to be divided.

It is well known that Ricord was led by his experiments to admit but one syphilitic virus; and it is by no means surprising that he should have formed such an opinion. During his numberless inoculations, he observed that, of all the syphilitic ulcerations, the primary sore only was susceptible of artificial propagation. He saw this sore, whether hard or soft, equally reproduced, or almost so; and he concluded that as they both possessed this same property, they were the result of the same poison. But how did he explain that one of these sores was never followed by constitutional symptoms, and the other always? He explained it by the different constitutions upon which the selfsame virus was planted; and said, with his usual imagery, that the seed was ever the same, but that the ground wherein it developed presented differences. I can vouch, however, for his having his misgivings all the time. He more than once told me by the bedside, many years ago, in his hospital: "You may rest assured that some day distinct origins will be found for the infecting and non-infecting chancres." Nay, we find the following words, which sound almost prophetic, in the "Letters on Syphilis" p. 359:—"In computing the cases of syphilization, published in Italy and in France, I find that it was always matter from soft chancres that was used, and that the only time that an inoculation was practised at Paris with pus from a hard chancre, the healthy individual, who was the subject of it, presented the development of a hard chancre of constitutional syphilis. If these results were constantly obtained, we must admit that there are differences in the symptoms which have reference not only to the peculiarities of the individual upon whom the pus is implanted, but also to differences in the pus itself." And it was eventually one of his own pupils who worked out the idea, and now bids fair to establish his duality in the place of his teacher's unicity. But before I attempt to sketch by what steps the new doctrine was brought to light, it it will be useful to inquire whether, before Ricord's time, doctrines analogous or partially so to those now promulgated had not existed. By this retrospective glance we shall be able to ascertain the real value of the new tenets which have been proposed.

The foreshadowing of the notions which were to lead to a belief in a plurality of syphilitic poisons was thrown by Hunter. It is well known that this great physiologist had arrived at the conclusion that gonorrhœa and chancre arose from the same poison; and he was considerably strengthened in this opinion by an experiment he made upon himself, and which was extremely likely to give support to the views he had adopted. He could not, however, deny that there was such a thing as *simple* gonorrhœa; nor could he help noticing that ulcerations were observed on the parts of generation, which, though resembling the chancre which was eventually to bear his own name, did not present all the characters of sores depending on actual syphilis. Hence we hear him say, in the chapter on the affections resembling the lues venerea: "Other diseases shall not only resemble the venereal in appearance, but in the mode of contamination, proving themselves to be poisons by affecting the part in contact, and from them producing immediate consequences similar to buboes; also remote consequences, similar to the lues venerea." The last few words contain a statement which has been found unsupported by facts; and it is almost strange that, deeply engaged as Hunter was in the consideration of these questions, he did not catch a glimpse of the soft chancre and its inability to infect the economy; the more so as he had so beautifully seized upon the characters of the bubo by absorption, which generally accompanies it. But such over-sight is easily explained by the fact that mercury was given for every chancre; so that the use of this metal always had the merit, when no constitutional symptoms appeared, as generally happens with soft chancre, of having prevented the development of systemic syphilis. The distinction between the soft and hard chancre, as subquently made by Ricord, could, therefore not be expected of Hunter. The latter, had, however, a kind of presentiment that such a distinction did exist; but he was not inclined to work out the problem himself, and merely says, "As the diseases in question (those resembling the lues venerea) are various, and not to be reduced to any symptom or order that I am acquainted with, I shall content myself with selecting the cases, and thereby put it in the power of others to judge for themselves, if they should not be inclined to adopt the conclusions I have drawn from them."—American edition, p. 492.) This was certainly not a distinct declaration of plurality of virus—far from it, but it was equivalent to saying: I have observed on the parts of generation appearances which resemble those occasioned by syphilis, but some characters are wanting to make the resemblance complete. How shall we class this kind of false syphilis?

The hint was not lost on Mr. Abernethy, who diligently collected facts bearing on this important question. It is a pity, however, that no attempt was made by the author to classify these facts, and by the assistance of analogy to introduce something like regularity into the mass of data which public and private practice brought before him. Our author was, besides, considerably cramped by the belief that the action of mercury is quite sufficient to prove the venereal nature (thereby was meant the syphilitic nature) of every symptom. This belief must have necessarily obscured the otherwise keen perceptive powers of Abernethy; hence we are not surprised at remarking a little confusion in the book called "Surgical Observations on Diseases resembling Syphilis," 1810; for we perceive that secondary symptoms are attributed to primary affections which are not venereal—that is to say, not syphilitic. We must naturally suppose that the diagnosis was not quite correct, either as regarded the primary or secondary manifestations. Nor is Abernethy at ease when he comes to think of this *pseudo* syphilis; for he says at the very beginning of the book alluded to:—"It cannot, I think, be denied, on due consideration of the subject, that many sores are induced on the genitals by sexual intercourse which are not the effect of the venereal poison, and that many of these infect the constitution, and produce secondary symptoms resembling those of that disorder. It may be asked, however, if these diseases be not venereal, what are they?" One would almost feel inclined to try and answer the question, were it not that the author erroneously introduces secondary symptoms, which merely tend to perplex.

Abernethy was, however, on the eve of disentangling himself from one of the trammels which cramped Hunter, and therefore had more advantage than his predecessor. Abernethy had namely, a foreboding that mercury was, perhaps, not so infallible a touchstone as was commonly imagined; for we hear him say (p. 58):—I shall prosecute the subject by relating some unequivocal cases of diseases strikingly resembling syphilis, but which, however, were disorders of a different nature, provided it be admitted that syphilis does not spontaneously get well without the aid of medicine." Nay, as we advance in the book, we find in the author a desire to erase constitutional symptoms from the diseases resembling syphilis; for he remarks, (p. 59,) in speaking of sores: "If is from their effects upon the constitution alone that we can judge whether they were syphilitic or not." Thus we have Mr. Abernethy actually paving the way for the doctrine of duality which has so lately been proposed, and which we shall presently examine. It is to be regretted that the author contented himself with noting down and describing the various phenomena which came before him in his practice, without trying right earnestly to find a string to lead him through the labyrinth. Indeed, he seems to have been fairly puzzled and worried by the varieties of symptoms that were brought under his notice; so much so, indeed, that he closes the work with the following words:—"Such is the result of the observations I have made on the treatment of these most vexatious diseases—diseases which must, I believe, perplex all surgeons, whatever opinions they may entertain respecting them, and whatever conduct they may pursue with a view to their cure."—p. 167.

(*To be continued.*)

Original Papers.

ON THE TREATMENT OF DYSENTERY BY THE ADMINISTRATION OF LARGE DOSES OF IPECACUANHA.

By E. S. Docker, Esq.,

SURGEON OF THE 2D BATTALION OF THE 7TH ROYAL-FUSILIERS.

In no part of the world, probably, does dysentery prevail more extensively, or with greater severity, than in the island of Mauritius, and nowhere is it more fatal. As surgeon of the 5th Fusiliers, I was stationed there nearly six years, and had therefore ample opportunity of becoming acquainted with this hitherto intractable and fatal disease. I say "hitherto," as it is my firm belief that, henceforward, dysentery may be as much under control and as expeditiously cured as simple diarrhœa.

For the greater part of the above period—viz., from 1851 to 1857—I had availed myself of the remedies in general use. At last, disheartened with my ill success in several bad cases, wherein I had perseveringly but ineffectually employed the *secundum artem* treatment, and remembering to have somewhere seen it mentioned that the powdered root of ipecacuan, in large doses, had been given with great effect in this complaint, I became anxious to make trial of an agent declared to be of such extraordinary efficacy.

I have tested this medicine in cases of every kind and degree. Out of upwards of fifty cases of dysentery I lost but one (in former years the mortality ranged from ten to eighteen per cent.); and in the instance in question death was caused by abscess in the liver: the primary disease had been not only cured, but very thoroughly cured, as I shall hereafter show. I must observe that I had at one time been in the habit of prescribing ipecacuan in the small doses recommended by Mr. Twining; but so ineffective was it when thus administered—excepting in cases of no great severity, wherein other medicines answered as well, *without* the inconvenience of nauseating,—that I had long ceased to employ it. On resuming the use of ipecacuan, I gave it in doses ranging from ten to ninety grains; rarely less than twenty grains. The larger quantity was given in urgent cases only, the ordinary dose being a scruple or half a drachm. The action of these large doses is certain, speedy, and complete; and truly surprising are sometimes their effects. In no single instance has failure attended this medicine, thus employed. I am not, of course, sufficiently sanguine to expect that it will invariably succeed; but of this I am convinced, that it will effect a complete cure in an immense majority of instances.

In all constitutions, robust as well as delicate, under all circumstances, the result is the same. In the very worst cases, when the strength of the patient is almost exhausted, after the whole range of remedies has been tried in vain, the disease running its course swiftly and surely to a fatal issue, ninety grains of ipecacuan have been given, and forthwith the character of the disease, or, I should rather say, the character of the *symptoms* has been entirely changed; for the disease itself is literally cured, put a summary stop to, driven out. The evacuations, from being of the worst kind seen in dysentery, have, not gradually, not by any degrees, however rapid, changed for the better; they have ceased at once, completely. There has been no inclination even to stool for twenty-four or thirty-six hours, the patient all the time in a state of delightful ease and freedom from pain; then at last, without aid of any kind, a perfectly natural, healthy evacuation, all irritation, pain, and tenesmus having at the same time entirely ceased.

Nor is there the disposition to relapse so common in acute dysentery. I have not observed what may be termed a true relapse in any instance. If the patient contracts dysentery again, he does so *de novo*. All that remains—the medicine having cut short the disease—is for the patient to recover strength; and this quickly follows, without any extraordinary care as regards diet and regimen, so indispensable and requiring such nicety of management in convalescence from dysentery generally. The usual necessity, moreover, for after treatment, in the shape of a long course of astringents, &c., is in most cases entirely obviated, a few doses of some vegetable tonic being all that is needed.

It may be asked by what means the stomach is enabled to retain such large doses of an emetic substance. The course I have generally adopted is as follows:—In the first place, a sinapism is applied over the region of the stomach, and simultaneously a draught given containing a drachm of laudanum. Half an hour after, when the sensibility of the stomach has been, by the action of the opium and counter-irritant, as much as possible diminished, and the patient's attention is occupied with the sinapism or by conversation, the ipecacuan is administered—generally in a draught, sometimes in the form of pill or bolus—and the semi-recumbent posture steadily maintained. In a considerable proportion of cases, the medicine is not rejected, or it is at least retained long enough to enable it to do its work. If necessary, I repeat it till the stomach does retain it. I never yet have been obliged to give it in the form of enema. Where so considerable a dose as sixty or ninety grains has been administered, I in general wait ten or twelve hours before giving another. Should the bowels, however, not meanwhile have acted, a repetition is not generally required. I ought here to mention that I begin the treatment of dysentery, in most cases, with an emetic—always with a thorough clearance of the bowels.

To those acquainted with tropical dysentery, the facts I have stated relative to the action of large doses of ipecacuan may appear almost incredible; the following cases, however, all of which were under my own immediate care, will, I trust, prove that I have not exaggerated:

Private J. H——, aged twenty-six, admitted April 1, 1855. This man's symptoms were decidedly dysenteric (I do not transcribe the case verbatim, as it would occupy too much space); "stools scanty, containing blood and mucus, accompanied with severe tenesmus, and tenderness on pressure over the descending colon." An emetic and purge were given at the outset, then turpentine in ten-minim doses, with a grain of opium every four hours. This answered very well at first, for on April 2nd, the report was "stools entirely feculent, semi-fluid, homogeneous, and of dark colour." And the motions *continued* feculent, though action of the bowels was frequent.

On the morning of the 7th (small doses of turpentine, with laudanum and astringents, had been continued up to that time), the report was "seven or eight natural semi-consistent stools during the last twenty-four hours." Ordered, powdered calumba, one scruple three times a day. This, however, proved to have been premature, for on the evening of the same day, an unfavourable change had taken place. "Bowels moved five times since morning; small quantities of feculent matter, with much blood and mucus." Ordered, sinapism to the epigastrium, and three grains of opium; half an hour after, ninety grains of ipecacuan in the form of draught. On the following morning the report was, "Bowels moved three times, very copiously, during the night; stools watery and feculent, and containing *no trace of dysenteric matters*. He retained the ipecacuan four hours, and then vomited. Is quite free from pain." There was no occasion to repeat the ipecacuan, for not a drop of blood or mucus was afterwards seen, and he was discharged, completely cured, on the tenth day from admission.

Private A. C——, aged nineteen, an exceedingly delicate, weakly lad, admitted on the 26th of December, 1855, "with frequent purging of scanty stools, consisting of a little feculent matter, mingled with sanious mucus; tenesmus severe. Ill two days prior to admission." In this case, ipecacuan was employed at the outset; scruple doses with twenty drops of laudanum in a draught every four hours. Sinapism to the entire abdomen.

27th—Action of bowels very frequent since admission—upwards of twenty times; stools of natural appearance, but copious and watery; tenesmus less severe. (It ought to be mentioned that, arriving from England with a batch of recruits in the month of September previously, he had, since landing in the island, scarcely ever been free from diarrhœa). Draughts and sinapisms repeated.

28th.—Bowels moved eight times yesterday—evacuations less watery, and five times in the night, when the stools were semi-consistent; no blood nor mucus. Ordered, compound soap pill, five grains, every six hours.

29th.—One very scanty, semi-fluid stool only since last report. Infusion of gentian three times a day.

30th.—No motion since yesterday. Gentian continued.

On the 31st, the bowels being still confined, they were gently moved with castor oil.

The patient was discharged quite well on the 6th of January. Eight days after, it was necessary to re-admit him on account of diarrhœa. Ordered, mercury with chalk, quinine, and Dover's powder every four hours. Next day he was better. On the 16th, however, there was a trace of blood in the stools. Ten grains of ipecacuan were added to each powder (every four hours).

Jan. 17th.—The blood had disappeared; stools were semi-consistent. He went on very well, gradually gaining strength, till the 24th, when diarrhœa returned.

25th.—Stools now contain blood and mucus, and are attended with straining. Ipecacuan renewed in ten-grain doses, every four hours.

26th.—Bowels not moved once since yesterday; three times during the night; stools semi-consistent, feculent, and intimately mingled with tenacious mucus. Ipecacuan draughts continued.

27th.—Stools of much better appearance.

On the 28th they were "perfectly natural," and so continued, with occasional relaxation, but free from the least trace of dysenteric matters for eleven days; then, on the evening of the 8th of February, the report was, "Bowels moved twenty times since morning; evacuations scanty, and consisting wholly of sanious mucus." Ordered, sinapism over the stomach, and draught containing twenty minims of laudanum; half an hour afterwards, sixty grains of ipecacuan.

Feb. 9th.—Up very little during the night, passing, altogether, not quite half a teacupful of sanious mucus; tenesmus, but no pain in the abdomen. Ordered, castor oil, twenty minims; mucilage, one ounce; ipecacuan powder, one scruple; tincture of opium, ten minims; peppermint water, one ounce, every four hours.

On the 10th, the only change observable was, that very little blood was passed. Ipecacuan powder, ten grains; tincture of opium, twenty minims; camphor mixture, one ounce; liquor acetate of ammonia, half an ounce, to be taken every four hours.

Under this treatment he daily improved, and on the 13th the stools were "few and perfectly natural."

After a second complete intermission of fourteen days, during which he was only kept in hospital for the recovery of his strength, he *again* had a return of dysenteric symptoms, "seventeen or eighteen stools, feculent at first, but latterly tinged with blood; tenesmus, with tenderness on pressure over the abdomen generally." Once more recourse was had to the ipecacuan draughts, as on the 10th, which had answered so well.—Evening: A few drops only of sanious mucus passed since morning. Ordered, castor oil, two drachms.

28th.—Purged seventeen or eighteen times during the night, and has passed a quantity of healthy feculent matter. Draughts repeated; also on the 29th of March.

April 1st.—The report was "stools perfectly natural," and his bowels continued composed till the 7th, when the stools again contained a little mucus and blood. Ordered the following draught every six hours:—Oil of turpentine, ten minims; mucilage, half an ounce; tincture of opium, twenty minims; powdered ipecacuanha, ten grains; peppermint water, one ounce.

On the 8th and 9th (the draughts being continued) the action of the bowels was frequent.

10th.—No change having been made in the treatment, the motions were "natural and *formed*."

After this he had no return whatever of dysenteric symptoms, but was so excessively weak that I could not safely discharge him before the 29th of April. He has since continued well, and perfectly free from his besetting ailment—diarrhœa.

The above case is a very good exemplar of the powers of ipecacuan in dysentery. Without so powerfully controlling an agent, I look upon it as morally certain that this boy would have died; for never, in the whole course of my service, had I to deal with a case in which the disposition to morbid action in the bowels was so marked. It will be observed that though there were returns of dysenteric symptoms, *yet during the intervals their cessation was complete.* I think that chills or checked perspiration—conditions it is impossible entirely to guard against in the Mauritius, especially at night and in the early morning—were the causes of the repeated attacks in this case.

Private S. M——, aged twenty-five; admitted with dysentery on the 11th of February, 1856. The symptoms were at first slight, and the treatment simple (chiefly purgatives and Dover's powder), and he went on very well till the 17th, when the report wast "four stools since yesterday, scanty, and consisting entirely of blood and mucus." Ordered powdered ipecacuanha, one scruple; Dover's powder, half a scruple: to be taken every four hours.

Feb. 18th.—"Four stools since last report, feculent and formed, with a trace only of sanious mucus; patient quite free from pain and tenesmus." Powders continued, with the addition of one grain of opium to each.

19th.—"Stools entirely feculent and consistent." He was discharged fit for duty on the 1st of March, having had not the slightest return of dysenteric symptoms after the 19th of February.

Private W. B——, aged thirty-six; a very weakly phthisical subject, with a marked disposition to atonic diarrhœa. Admitted with dysenteric symptoms on the 18th of March, 1856. "Purging frequent, with severe tenesmus; stools watery, and contain both blood and mucus." He was ordered an emetic immediately, followed by an ounce of castor oil, and a grain of opium. Evening: "Purged nine times since admission; evacuations copious and watery, with a large admixture of fluid blood." Ordered forthwith the sinapism and drachm of laudanum, and half an hour after, sixty grains of powdered ipecacuan in form of pill.

19th.—"Feels much better; bowels moved seven times during the night; stools liquid, feculent, and containing very little blood and mucus; tenesmus considerably diminished." "The ipecacuanha was retained." Ordered a draught, every four hours, composed as follows:—Oil of turpentine, twenty minims; mucilage half an ounce; peppermint water, one ounce; powdered ipecacuan, one scruple; tincture of opium, twenty minims.

20th.—"Four stools yesterday of better appearance, two during the night; a few drops of pus-like (the most harmless) mucus only perceptible; feels much better; tenesmus entirely gone." Draughts of ipecacuan and turpentine continued, with the addition of twenty drops of castor oil to each.

21st.—No motion yesterday; three during the night, natural and semi-consistent." Draughts discontinued.

22nd.—"Two perfectly natural stools since last report." Ordered a scruple of powder of calumba, three times a day.

23rd.—"Improvement maintained;" and he was discharged quite well on the 28th.

There could not well be a more satisfactory case than the above. A debilitated, delicate subject, attacked with dysentery—and while the attack lasted it was *severe*—is cured in ten days, and so *radically* cured as to have had no return whatever of bowel complaint, though previously much disposed thereto.

I now come to one of the worst cases that occurred in the 5th Fusiliers during the time I was in medical charge. This case exhibits the specific action of large doses in dysentery in a striking manner. At that time I was not so fully conversant with this medicine, and as the man was extremely ill at the time of admission, I deemed it advisable at first to employ calomel; and this medicine, which by many is looked upon as a specific in dysentery, had a fair trial—so fair, indeed, as to place the life of the patient in considerable jeopardy. At this juncture it will be observed by those practically conversant with dysentery, that the man's symptoms were indicative of extremest danger. Fortunately, recourse was had to ipecacuan; and this medicine was given in full (drachm-and-a-half) doses three times. But I must not anticipate. As this case is so interesting, I make no apology for transcribing it nearly in full:—

Private J. T——, aged twenty-eight, admitted March 18th, 1855; a slight, narrow-chested, delicate man. Has frequent purging of copious stools, consisting mostly of fluid-feculent matter, with some admixture of mucus and much blood. Says "he has no pain in the belly, no tenderness on pressure." (This was taken *cum grano salis*, for there was an evident disposition to make as light as possible of his complaint: he knew that he had been guilty of disobedience of orders in not coming to hospital sooner. Closely questioned, he at last confessed that he had been ill for several days before reporting himself sick.) Admits having tenesmus. He was under treatment for acute dysentery in April, 1852. Ordered an emetic immediately, and every four hours a draught consisting of oil of turpentine, ten minims; acacia mucilage, half an ounce; tincture of opium, twenty minims; peppermint-water, one ounce. In the evening the report was: "Has passed since morning two scanty dysenteric stools." Ordered half an ounce of castor oil and twenty drops of laudanum.

March 19th.—Eight motions during the night, copious, feculent, and semi-fluid, with some froth tinged with blood on the surface; pulse 92, soft; tongue coated in the centre. To continue draughts of turpentine, &c.—Evening: Bowels have acted three times since morning; stools scanty, and of a highly dysenteric appearance. Ordered ten grains of calomel and one of opium immediately; the same to be repeated at four o'clock in the morning.

20th.—Has had during the night eight or nine motions, fluid, dark-coloured, feculent, with a little mucus, and more blood on the top; straining very severe, and there is much tenderness on pressure over the cæcum; pulse 132, soft and rather full; tongue furred. Ordered—calomel, two grains and a half; tartar emetic, one-eighth of a grain; hydrochlorate of morphia, one-sixth of a grain, every four hours.—Evening: Bowels moved eleven times since morning; stools more dysenteric in appearance, with less of feculent matter. A sinapism was ordered to be applied immediately over the stomach; internally, sixty minims of laudanum, and half an hour after, a draught consisting of a drachm and a half of ipecacuan to an ounce and a half of water.—Ten P.M.: The report was that he retained the ipecacuan draught two or three minutes only; has been moved twice since six P.M.; stools very bad indeed, quite liquid, with hardly a trace of feculence, consisting chiefly of a little mucus, and a very large proportion of fluid blood; he is excessively weak; pulse rapid and thready, intermittent; surface cold, and bathed in perspiration; tenesmus severe. The opiate draught was now repeated, but this time with twenty minims only of laudanum; half an hour after, ninety grains of ipecacuan, as at six o'clock.

21st.—Has passed a tolerable night, and feels better, bowels not having been once moved since the administration of the last dose of ipecacuan, which he retained an hour and a half, then vomiting three times. He feels nausea at present. Is perfectly composed, and free from pain or irritability. Pulse 120, full and soft; tongue furred, but moist.—Evening: No action of the bowels since morning; the draught was retained three hours: he then vomited once. To have, at bed-time, a draught composed of liquor acetate of ammonia, half an ounce; liquor acetate of morphia, thirty minims; tincture of matico, and compound tincture of lavender, of each one drachm; peppermint water, one ounce.

22nd.—Marked improvement in every respect. After an interval of thirty-four hours his bowels have at last acted, during the night, once only; stool scanty, semi-consistent, feculent, and homogeneous, without a trace of blood or mucus. He is entirely free from pain or tenesmus, and perfectly comfortable in every way. Draught last ordered to be continued every six hours.

23rd.—Improvement continues. No motion since last report. Pulse 100, jerking; tongue coated. Ordered, camphor mixture, one ounce; liquor acetate of ammonia, half an ounce; disulphate of cinchona, two grains; tincture of lavender, one drachm: to be taken every four hours. Chicken broth; brandy, half a gill.

24th.—One scanty, consistent, entirely feculent stool; pulse 90, soft; tongue cleaning. Ordered, infusion of gentian, two ounces; disulphate of cinchona, two grains; three times a day. Brandy, one gill.

25th.—Improvement maintained. No motion. Gentian draughts repeated.

26th.—Continues to get better; one natural evacuation. Tonic draughts continued. Broiled chicken.

27th.—Same report. He is very weak. Draughts continued. Ordinary diet, and brandy.

29th.—Convalescent. Gentian and cinchona draughts continued.

April 1st.—Same report. Draughts continued.

3rd.—He is still rather weak.

4th.—A trace of mucus in the stools (three since last report), and there is slight tenesmus. Ordered, castor oil, two drs.; gentian and cinchona draughts continued.

5th.—No motion since last report, nor has he any inclination to stool. Ordered, castor oil, half an ounce; tonic draughts continued.

6th.—Bowels moved three times after last dose of oil; stools natural. Draughts continued.

7th.—Some thick, yellow mucus only passed since last report. Castor oil, two drachms, immediately; a scruple of powder of calumba three times a day.

8th.—Has passed three feculent stools, entirely free from mucus, since taking the oil. Calumba continued.

9th.—No motion since last report; has nearly recovered his strength. Castor oil, one drachm; calumba powders continued.

11th.—Discharged cured.

A more remarkable case than the above could hardly be. It is an unquestionable fact that this man's life was saved by ipecacuan, given in the doses it was, *and by ipecacuan alone*, for the opium *only* aids in enabling the ipecacuan to be retained. Moreover, I am convinced that, in the condition he was on the evening of the 20th March, by no other known means could he thus, as it were, have been snatched from the brink of the grave. Instead of dying, however, this soldier was at his duty, completely cured, in little more than three weeks from his admission, desperately ill, into hospital. It will, I think, be conceded, that this last case, if not those preceding it, ought to secure for the ipecacuan-in-large-doses treatment at least a fair trial.

To render this record complete, I will now give particulars of the only case (already alluded to) in which dysentery, in spite of this treatment, terminated in the death of the patient. This case is specially interesting as showing the condition of the large intestines, and the action of the remedy upon their tissues, six days after the primary disorder had been subdued. The subject, in this instance, was a young sergeant, who, being married, of course did not report himself sick till he could hardly walk or stand. (His widow subsequently informed me that he had been ill three weeks previous to coming into hospital.) I never saw worse symptoms. The evacuations, which were excessively frequent, consisted entirely of sanies, and large coagula of pure blood, without a particle of feculent matter. The man, in short, appeared to be in a dying state. In this case the action of the ipecacuan, from the long time the disease had existed uncontrolled, was not so speedily manifested as it usually is. Not till the fourth day from the time the first ninety-grain dose was administered, did the stools assume a *perfectly* natural appearance. Having once done so, however, not a trace of blood or mucus was afterwards seen. I may here mention that in the course of these four days he took in all two ounces of ipecacuan. During the next four days the fearful drain of the pabulum vitæ, and hardly less wearing irritation, having ceased, he had rallied considerably. But on the fifth day an unfavorable change took place, and it then became evident that abscess had formed in the liver. His pulse, which on cessation of the dysenteric symptoms, had risen in a marked degree, became again depressed, and in spite of sedulous support, he sank rapidly, and died the following day. Post-mortem examination demonstrated how prompt had been the action of the medicine in the complete cessation of ulcerative, and substitution of reparative, action. The lining membrane of the large intestine in its entire course was covered with recent ulcers of enormous size—in some places, indeed, so large as to occupy the circumference of the gut. The whole had begun to cicatrize; their edges were even, surfaces smooth, and covered with a fine epithelium; all thickening of the coats had disappeared! The bowel contained natural, semi-fluid fæces; no vestige of mucus, pus, or blood! To those familiar with the usual pathological phenomena resulting from dysentery—the universal thickening and softening; extensive ragged ulcers, and masses of sloughy *débris*, mingled with coagula; the state of things I have described in this case will appear not a little remarkable. But still more extraordinary, perhaps, is the fact, that any reparative process should have taken place under the adverse circumstances of great impairment of the vital powers —a condition resulting as well from the primary disorder as from the organic disease then hastening this poor fellow to his grave. On opening the abdomen, abscesses were seen to occupy nearly the whole of the liver. It will suggest itself that the fatal event might have been averted if ipecacuan had been given at an earlier period. From the promptitude with which it arrested the bowel complaint, pus might not have been allowed time to form.

I do not think the above case invalidates the presumption that this treatment, if resorted to in time, will at least greatly diminish the chance of absorption of pus, and this simply from the wonderful celerity with which it acts, not only in at once quelling the disease, but also repairing the mischief which that disease has caused; at least

I think the appearances above described warrant belief that having, by its antiphlogistic power, subdued the inflammation of the large intestines, and by its powerfully constringent property stopped the flow of blood from their capillaries, the action of this medicine may not end here. If this conjecture is well founded, it indicates an advantage consequent upon the large-dose treatment, the importance of which cannot be over-rated.

Another and more certain benefit resulting from this treatment is the apparently entire obviation of chronic dysentery, with its many and protracted miseries. Who that has to contend with a wearisome and disheartening case of this kind will not hail with delight a remedy which enables him to effect a cure in the same number of *days* that formerly would have occupied *weeks* or *months;* a cure, moreover, so *complete* as to send his patient out with a new lease of life, actually better after his illness than he was before!

As regards the *rationale* of the action of ipecacuan in large doses, I will not venture on so debatable a point to express an opinion. That it is a very energetic *tonic* is sufficiently evident; equally certain that it is a most powerful *styptic*, (this being the effect of its tonic property,) and as such likely to be of great use in some active and in most passive hæmorrhages, especially in those occasioned by exudation from mucous surfaces. In dysentery, at all events, the value of this medicine is incontestible. I believe the time may come when it will be considered as much a specific in this case as bark is in ague and sulphur in itch.

That ipecacuan in large doses has been before given in dysentery, I have already stated; I do not, however, think its inestimable properties in this form are generally known. My object in desiring to make known to the profession facts which have come under my own observation is, if possible, to obtain for this mode of treatment a more extended trial, as by its universal or even general employment I have no doubt that the mortality from a fatal and hitherto unmanageable disease may be very greatly diminished.

July, 1858.

ON A SUCCESSFUL CASE OF EXCISION OF THE KNEE-JOINT.

By P. C. Price, Esq., M.R.C.S.

SURGEON TO THE GREAT NORTHERN HOSPITAL; TO THE METROPOLITAN INSTITUTION FOR SCROFULOUS CHILDREN AT MARGATE, ETC.

The details of another case in which I lately excised the knee-joint on account of long standing and very extensive disease, may, perchance, tend to modify opinions not unfrequently advanced against the utility and advantages of the operation, while a further statement of success cannot fail to be productive of interest and instruction:—

J. M. S——, aged fifteen, born at Manchester, inheriting a thoroughly strumous constitution, was, at an early age, left an orphan. Ill-nourished and neglected, she obtained admittance into a London workhouse, and, at various periods, was removed into its infirmary on account of sickness. About five years since, when ten years of age, she remembers having struck her right knee, and that the accident was followed with very considerable pain, swelling, and the formation of matter. In due time, however, the use of the joint was recovered, and she remained in tolerable health, till unfortunately, the knee again received an injury, which compelled a second entrance into the infirmary. Iodine paintings, blisters, and rest removed the local distress, while a subsequent residence at a sea-side institution served to repair her shattered constitution.

In the month of October, 1855, she was sent to Margate, and there came immediately under my notice. Owing to the excellent management adopted at the institution in which she was placed, the general condition greatly improved, while the local disturbance remained in abeyance.

In April, 1857, unfortunately an accident awakened the disease that seems to have remained latent in and about the joint. This last mishap was followed with considerable pain, and although immediate rest on a splint was observed, the distress in the course of a few days appeared greater than on previous occasions. Swelling of the joint, with constitutional symptoms, pointed to the severity of the present relapse; and as irritants had previously been of service, they were again resorted to. Iodine, blisters, and the actual cautery certainly tended to abate the pain, but the benefit was only temporary. The character of the swelling, careful manipulation, and other features, pointed to the lower end of the femur as the chief site of the local mischief. After the lapse of a few months, a fistulous opening appeared on the outer side of the knee, through which flowed an unhealthy secretion. A probe passing along this fistulous canal reached the interior of the articulation. It was now evident that considerable mischief was taking place in the structures composing the upper portion of the joint. For many weeks the child suffered excessively; the spirits drooped, the health rapidly gave way. Constant pain, starting of the limb, night-sweats, with shivering, plainly told the necessity for more decisive measures. Procrastination was dangerous, and the mere entertainment of hopes delusive. The child most willingly submitted to any operation I might think best suited to her case. Two proceedings appeared admissible—amputation and resection. The latter seemed the more correct, as it was not only in accordance with the principles of modern surgery, and was fraught with less risk to life, but it was an operation in every way more humane, and calculated to insure to the patient the retention of a limb useful and free from disease.

Dec. 7th, 1857.—The child having been placed under the influence of chloroform, a semilunar flap of integument was turned upwards. This reflected portion consisted chiefly of skin, the avoidance of other tissues being desirable. The lateral incisions, as is my usual plan, were carried as far back as possible. On opening the joint cavity, the chief mischief appeared to occupy the back portion of the condyles of the femur, as the articular cartilage was destroyed to some extent. Slight pressure with the fingers served to break down a weak barrier of thinned cartilage, which separated a large cavern in the outer end of the femur from the articulation. The application of the saw to the condyles allowed the escape of a quantity of unhealthy pus, containing débris of carious bone. The destruction to the osseous substance of the lower end of the femur, and especially that portion corresponding to the external condyle, appeared so extensive, that some gentlemen who witnessed the operation thought it more expedient to resort to the amputating knife. Experience had, however, taught me otherwise; and although a very considerable cavity remained after a free use of the gouge and scoop, still it seemed but right to give the patient every available chance of retaining a serviceable limb. A free and healthy bleeding from all parts of the cavity gave a tolerable assurance that the majority, if not the entire amount, of disease had been removed. The head of the tibia was to all appearance unaffected, and therefore, the mere removal of the articulating cartilage sufficed.

I have on other occasions advised the removal of the patella even if it be not included in disease, as its retention is not unfrequently fraught with considerable mischief. I cannot recollect any great advantage having been gained in any special instance in which the bone was allowed to remain, and from the subsequent inconvenience and suffering I have seen more than once to occur in cases in which it was saved, I now invariably take it away.

The hæmorrhage, perhaps, was more copious than usual, owing to the free bleeding from the lower end of the femur. The cut surfaces came strictly into apposition. A few points of suture restored the flap to its adjacent parts, while the cavity in the lower end of the thigh-bone was plugged with strips of lint. The limb was accurately placed upon the splint I am in the habit of using *before* the patient was removed from the operating table. I cannot too urgently insist upon the importance of this step, for I have seen the most disastrous consequences ensue from its non-observance.

I noticed that, in this instance, the shock from the operation was greater and more lasting than on any previous occasion in which I have resorted to resection of this articulation. I attribute this additional disturbance to the somewhat protracted time the operation required for correct performance, and to the low condition into which my patient had fallen from acute and lengthened suffering. The continuance for a day or two of an obstinate nausea and vomiting was, perhaps, somewhat dependant upon the inhalation of chloroform —although, in all probability, the shock to the nervous system would offer sufficient explanation. Some slight oozing took place from the bone, which was, however, controlled by means of cold applications used externally.

In a few days suppuration commenced, and after the floating away of some unhealthy material, composed of the débris of bone and altered blood, the discharge became healthy. The wound was treated in accordance with the principles of surgery, and the patient, after the first few days, began rapidly to improve. Freedom from sleepless nights caused by almost intolerable pain, the return of the appetite, and increasing good spirits, tended to advance her recovery.

The limb was allowed to remain *for seven weeks* without being once shifted or removed, in any way, from the position in which it was placed at the time it was dressed upon the operating-table, and only *once* again was it cleansed before a gutta-percha splint was substituted for the apparatus in which it had remained for so many weeks.

I would again impress upon all surgeons who undertake the operation this great secret of success. A close acquaintance with the rise and progress of this special proceeding has convinced me of the extreme importance of meddling as little as possible with the limb when once it is placed in an accurate position. I have seen death supervene entirely from bad management. Amputation has frequently been necessary. Protracted and imperfect recovery has still more often followed a misunderstanding of this highly important feature.

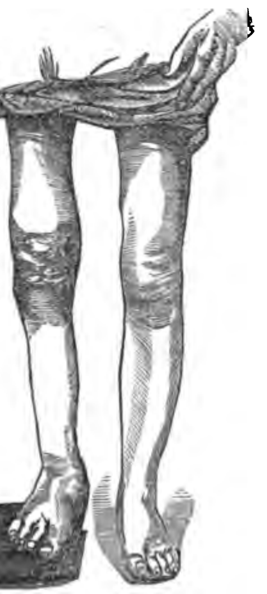
The daily management of the case fell to the care of my brother, Mr. William Price; and to the extreme interest he took in following out my method of treatment the patient is much indebted for a rapid recovery.

On the 23rd of March my brother writes: "The wound has quite healed, one little sinus on the front of the leg, together with the old-existing one on the outer side, being the only open sores. The discharge is so slight that the parts only require to be dressed twice a week. She can bear a considerable pressure upon the leg, and is up and out every day. The shortening is comparatively slight, and the anchylosis osseous and remarkably firm. The leg is in a perfect line with the thigh, and the case is in everyway highly satisfactory."

Subsequently I have seen the child, and her condition, in every respect, is certainly all that could be desired.

The accompanying woodcut is drawn by Dr. Westmacott, from a photograph taken by Mr. Hicklin, six months after the operation. It faithfully represents the condition of the patient's lower extremities. The swelling of the right ankle is a feature often observed after removal of the knee-joint.

There is one point, in connection with the operation that was performed, of extreme pathological interest; the rapid reparation that followed the removal of the carious bone. It has been asserted by some surgeons that osseous consolidation between two or more bones entering into the formation of an articulation, when affected with disease or some special inflammation, is of rare occurrence,



and that after removal of a destroyed articulation by the operation of resection, anchylosis by bone material is by no means a frequent result. Everyday experience, and information afforded by museums, must satisfy the most incredulous of the erroneousness of such assertions; whilst everyone, who is at all acquainted with the history of resections of the knee, knows that cure by osseous anchylosis is the rule and not the exception. It has often fallen to my lot to see the great efficiency of Nature in repairing bone structure which has been implicated by strumous disease; and the highly satisfactory result that has followed in this case will give me additional reason for resorting to excision of a vitiated joint, even when more extensively destroyed.

Green-street, Grosvenor-square, 1858.

ON PEPSINE AND GALEN.—A LETTER FROM DR. L. CORVISART TO DR. CHAMBERS.

Artificial digestion, a method of treatment not often used in everyday practice, and an entirely new medicine—viz., pepsine, were adopted in England in 1857, and after having received the cordial support of Dr. Ballard, found in you a zealous and conscientious propagator. This conquest in therapeutics was so little known, so little appreciated in England, even by yourself, that a year before (1856),[*] in a voluminous work, rich in physiological researches, "Digestion and its Derangements," this system of treatment was passed over in entire silence. So long ago as 1854 I had introduced, in a clinical work, entitled "Dyspepsie et Consomption, usage de la Pepsine," (Paris, Labé, publisher,) this medication, which was found exceedingly bold and new, based on rules, whether clinical, pharmaceutical, or as regards doses, so sure and precise, that *even at present, four years after the publication, they are exactly followed out even by you, Sir, both in your practice and professional instruction at St. Mary's Hospital.* Several other pamphlets which I have published, and a still greater number of memoirs on Pepsine, from the pens of learned and renowned observers, gave their sanction to what I had pointed out as pharmaceutical and clinical principles, founded upon clinical observations, (see the general list of works at the end of this letter.)

Considering your activity in 1857, and your silence before 1856, great was my astonishment to see you in your lectures at St. Mary's Hospital (published in The Lancet,) pass over, in your historical notice, all these works, and declare that every one is acquainted with artificial digestion as a medication, and with pepsine as a therapeutic agent—every one, without exception, Galen, Pliny, both the ancients and the moderns, every author of pharmacopœias down to Schröder. This, Sir, has not however, occasioned much emotion in my mind, as every discovery and every application of a discovery, must necessarily pass three ordeals of trial.

In the first, the discovery is denied, and the author accused of presumption and utopian ideas.

In the second, both the author and the invention are joked at, (remember the quarrels about antimony.)

In the third period, the discovery is accepted by the force of evidence; but the author by whose perseverance and tenacity it triumphs is set aside and forgotten, and it is said that he has done nothing.

Although it were not so intended by you, what are called pepsine and artificial digestion, with their author, have arrived at the third period in your lectures.

But if contemporary history is written with difficulty, and requires much prudence, how much is this difficulty increased (although you have overlooked this circumstance) when we are required to describe with accuracy what happened eighteen centuries ago!

On the same subject, and with the same documents, how widely we differ! In your lectures you state, 1st, that Pliny and Galen were acquainted with the fluids of the stomach and their physiological uses. But I affirm that such an idea never presented itself to the mind of Galen. If he was aware of the existence of a particular humour in the stomach, he took care to state in two passages that it was produced by the food: "Hippocrates dixit manifeste cibum potumque in ventriculum venire ac humoris qui in ipso extrorum mixtione factus est." (Galeni Oper., ed. Chart. 1579, t. v., p. 247:) and again, "Nam ventriculus cibis circumdatur *peculiarem cibi* humorem excipiis eliciens." (Ib., t. v., p. 199.) And whenever he treats of the gastric digestion, he never mentions a humour, secreted by the stomach, which soaks the food and acts as a solvent.

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[*] At this period the French Imperial Institute, after four months of clinical experiments, made publicly by me at the hospital of the Charité, in the ward of one of its members, Professor Andral, had already done me the honour of awarding me the highest prize given that year in medicine, that of the first order, *for having really introduced pepsine into medical therapeutics after physiological experiments and clinical observations.* This reward appeared to me still more flattering when I discovered that it introduced me to very illustrious company, as the same year the Institute gave a prize of equal value to Lehmann for his "Treatise on Physiological Chemistry." My first public clinical experiments were made in 1851 at the hospital Beaujon, in the wards of M. Legroux; others were made in consultation with Dr. A. Godart, and are published in my work; the other cases which are there related were taken at my own request by eminent physicians, who very politely sent them to me in order to confirm mine.

In his "Definitions," where we find him employing the clearest and most precise terms, he mentions the theory of digestion, and says, "Concoctiones alimentum fieri, quidem putat Hippocrates a *calido innato;* Erasistratus contritione ac levigatione; amplexu ventriculi et ascititii spiritus (*pneumatos*) proprietate; Empedocles autem putrefactione." (Ib., t. i., p. 243.) He himself, to the question, "What is digestion?" has answered by his doctrine, "Digestio fit a naturâ per calorem." (Ib., t. i., p. 243.)

In another passage he explains the manner in which he understands how the internal heat attacks and liquefies the food: "*Ignis interior* (o pur intos) cibum potumque capit, liquefacit sane." (Gal. Oper. ed. Chart., t. v., p. 247.)

Nowhere is mention made of the gastric juice that you suppose to be so well known by Galen and Pliny.

2. But may you not be wrong, and may not the ancients have been acquainted with the gastric juice, under the name of *pythia?*

If the ancients had understood by their word *pythia* (coagulum or rennet), the special agent by which every stomach digests, they would certainly have admitted the existence of this indispensable agent in the stomach of every animal. But they declare expressly that the substance in question is found only in the animals which possess four stomachs, and those which still suck their mother (cetaceans are comprised in this category): "Habent quod coagulam vocatur, ommaque plures habent ventres (stomachs) curent quæ unum habent, excepto lepore." (Arist., "De part. Anim.," ed. Casaubon, 1650, p. 775.) So that if, with you, we admit that the ancients were acquainted with a gastric juice secreted by the stomach, under the name *pythia* (coagulum, rennet), it would be necessary to admit that they precisely denied the gastric juice in all adult animals, and particularly in man. Galen admits the exception made in favour of the hare, and declares that, "Ac leporis quidem coagulum comitialem morbum, si cum acete ebibatur, præterea profluvium muliebre sanare proditum est." (Gal. Oper., ed. Chart., t. xiii., p. 283.)

3. Not only was rennet (pythia, coagulum) far from being considered by the ancients as a substance proper to all animals, as we consider the gastric juice, but this substance was far from belonging to the stomach even of those privileged animals which possessed it. In fact, rennet was considered by the ancients, down to the time of Schröder, whom you cite, as something derived from milk rather than from the stomach.

"Coagulum lactis substantia est......hoc habent (qui plures habent ventres) coagulum, propter lactis crassamentum......Curent quibus singuli ventres, quod eorum lac tenue sit." And then the exception in favour of the hare is explained: "Leporis coagulum sit......quoniam herbam lactei succi pascatur." (Arist., "De Hist. Anim.," lib. iii., cap. 21.)

Schröder, who is one of the latest Galenists, says, according to the Galenic tradition: "Coagulum nihil aliud est quam *lactis* in ventriculo quadrupedem quæ adhuc sugunt, et concretio et condensatio." ("Pharm. Med. Chim.," p. 122. Lugdum, Batav., 1649.)

You see, Sir, that at this period, as well as at that of Aristotle, Pliny, and Galen, they were far from believing that they administered the gastric juice (of which they had no notion) when they administered the coagulum or rennet (pythia).*

To resume. The ancients—1, were not acquainted with the liquid secreted by the stomach.† 2. They were entirely ignorant that there was any liquid whatever capable of aiding digestion. 3. They regarded rennet rather as milk, coagulated milk,‡ coagulum, and restricted its possession to a very limited number of animals, far from believing it was indispensable to all of them, as we at present consider the gastric juice.

In a word, the ancients were ignorant of the secretion, the existence, and the necessity of the gastric juice to enable the stomach to digest.

Admitting that Galen progressed from discovery to discovery, you say that, as an equivalent of the gastric juice, he administered the stomach of birds, and that he knew before the moderns that the boiling temperature "destroys its virtues."

You are aware, Sir, that without any scientific reason, and even in spite of every scientific reason, the physicians, in the infancy of our art, believed that they acted in conformity with its principles in administering the lungs of the stag to those who suffered from oppressed breathing, brains to idiots, bear's-grease to the bald, testicles to the impotent (Galen. Oper. ed. Chart., t. xiii., p. 302): "Ut mulier concipiat leporis vulvam affectam tere......et da cum vino." (Galen. Oper. ed. Chart., t. x., p. 690.) Galen is filled with these receipts, but he is a mere historian; and Galen, when speaking about the stomach, ridicules with a certain dose of Attic salt (this passage has escaped you) the very discovery which you ascribe to him, and almost declares that if, believing in errors, stomachs were given to aid digestion, nothing more would be required to render orators eloquent than to administer the tongues and beaks of chattering birds: "Quidam autem falso struthionis ventriculum laudant, an medicamentum quoddam, quod concoctionem (digestionem) juvat;[*] alii vero magis mergi ventriculum laudant, sed hæc neque ipsa facile concoquuntur, neque aliis est *in eo ipso, ceu medicamenta auxiliantur*, veluti zingiber et piper, et præterea alia ratione vinum et acetum;......quod se de volucrium animalium lingua ac rostro docere aggredior, quum ea nemo ignoret, garrire merite existimabor." (Galen. Oper. ed. Chart., t. vi., p. 388.) In another place he mentions having personally experienced the vanity of these expedients: "Ventrum mergi quidam commendant tanquam medicamentum concoquens......et nos id experti vanum." (Ibid., t. xiii., p. 304, de Simpl.) Here is certainly the passage of Galen that you cite (de Simpl. xi. 13); but unless the word *concoquens* (operating the coction) be changed into *concoctus* (cooked), I cannot see how Galen can be reputed to have said that boiling water destroys the power of the stomach. I insist no more on this point, as it is allowed that Galen formally denies, not that this power can be destroyed, but that it exists. No doubt can remain as to the physiological opinions of Galen, nor can any exist as to his therapeutics. A little involuntary exaggeration of the value of words has completely transformed Galen under your pen. Nothing more is required, in order to drag Galen through the complete series of therapeutical discoveries, but to understand by the words *lac* and *sanguis* which he employs, *aliments*, and then by extension all aliments; to translate *dissolution* by digestion performed by the stomach, and to confound the virtue of the old and celebrated digestive ointment with the digestive faculty of the stomach. It is to this last point that I take the liberty of directing your attention. The substance called *pythia*, coagulum, rennet, although its nature was unknown to the ancients, was employed by them in the remotest periods of antiquity to coagulate milk for the purpose of making cheese. The ancients had remarked that milk coagulated by this substance was sometimes dissolved by it; they had also observed that coagulated blood underwent at times the same changes as milk. Dioscorides (first century of the Christian era) mentions having made the experiment on a seal. Like an able reasoner, he immediately establishes all the practical consequences of this fact—coagulum must coagulate and dry up all the fluxes: "Cœliacis, dyssentericis, ac mulieribus fluxa uterino laborantibus confert"—must dissolve clots of blood such as those produced by hæmoptysis, "Præterea confert ad grumos sanguinis et rejectionis a pectore." (Dioscor. ed. Kuhn, 1829, t. i., p. 206.)

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* Hear what your great Cullen says, and you will see how much at that period, the substance of milk was considered to be of the same nature as rennet; as by increasing the quantity of milk poured into the stomach of slaughtered animals, the coagulum was proportionately increased:—"Rennet is generelly obtained by filling the fourth stomach (rennet-bag) of a calf *with milk, which becomes coagulated*, and this stomach is preserved for use in salt water *with the rennet coagulum that it contains.*"—Cullen, Mat. Med. Edin., 1789.

† In 1668, the reaction of the gastric juice remained to be discovered as in the time of Galen. Van Helmont, to whom the discovery of the gastric juice is attributed under the name of *animal aquafortis*, makes no mention of it whatever; and Willis obtained great honour by saying that it was a leaven that digested. But he is still far from the period of the discovery that this leaven is secreted, formed by the stomach itself; for Willis expresses himself thus:—"Chyli enim *reliquiæ* inibi aggestæ et ad acorem servatæ, *in fermentum* quoddam et pro appetitu et pro digestione requisitum, evadunt."—De Med. Op. (Prim. Viar. Descript.) t. i., Lugd. Batav. Huguetan.

‡ By *pythia* was frequently understood, not the first milk that arrived at the stomach, but the first milk not yet removed from the breast, or colostrum (see the dictionaries. Pythia frequently meant *hippace*—merely cheese made from coagulated milk.

A century afterwards Galen repeats this, and hardly anything else. He however adds, that the coagulum dissolves milk and clotted blood even when in the stomach. "Sed et lac in ventre dissolvere (dialuein).[*] (Ed. Chart. t. xiii. p. 283.) Neither one nor the other mentions either aliment in general *cibi* (*trophè*), nor even aliments analogous to blood or milk; both are completely silent on the subject of digestion.

A single word for you, Sir, suffices to resume the whole doctrine of Galen, and at the same time the errors into which you have fallen. Galen, you say, arguing on physiological grounds, attributes the *digestive power* to coagulum. The digestive power of Galen, in my humble opinion, is by no means the property which resembles that of the stomach: it is that which resembles the property of the digestive ointment: it is the suppurative, resolutive, diaphoretic, sudorific power. Now, Sir, I will quote the very book, chapter, and line which you yourself have quoted: Gal. oper, "De Simplic. Med. Fac.," lib. xi., c. 13, "De Coagulo" (t. xiii. p. 282 of the ed. Chart.); but allow me to cite, not the Latin translation, but the identical words, the Greek phrase of Galen:—

"Pythia esti diaphorètikès dynameôs."
Coagulum " "
Rennet " "

Do you absolutely insist on translating "diaphoretic" by the digestive power of the stomach, by the power equivalent to the gastric juice! So be it. Let us thus translate Galen's book, "De Simple. Med. Fac.," section *of plants*: The asphodel pssesses the digestive power......like the stomach—"Asphodèlos esti diaphorètikès dynameôs" (ed. cit., t. xiii. p. 161). Agrimony possesses the digestive power of the gastric juice—"Argemonè dynameôs esti diaphorètike" (ibid. p. 150). The *ageraton* possesses the digestive property—"Ageraton esti dynameôs diaphorètikès" (ibid. p. 150). The same for the periwinkle, apokinè, (p. 158), the bubo-galbanum (p. 164), the ebiscus (p. 170), the hemerocal (p. 177), the amini cummin (p. 228), the verbascum (p. 238), the sandarac (p. 269)—"Ekein diaphorètikas dynamëis."[†]

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[*] Galen says, in several passages, that stomachs are not very favourable to digestion: "Itaque intestina et ventriculum duriore substantia constant, quam caro, et pro duriore eo etiam concoctu (digestione) difficiliore." (Gal., De Probis Pravisque, cap. vi., ed. Ch., t. vi., p. 480.) So that the stomach not only does not assist in digestion, but is also itself digested with difficulty.

[*] It is true that Aristotle, five centuries before Galen and four centuries before Dioscorides, had said: "Coagulum qui sumitur in fœtu, dissolvit sanguinem et lac in stomacho et vesica.... ." It is true, also, that he had already reduced to a formula the properties of coagulum, and, by the enumeration of its properties, the explanation of its use: "Coagulum est calefactivum, resolutivum, excitativum, stypticum......" (Artist., De Hist. Anim., p. 194, ed. Casaubon Adrillo Allobrogum, 1650.)

[†] With a great number of plants that I have omitted to mention, coagulum is placed according to Galen in the class of acrid, diaphoretic, and siccative substances: "Pythia esti drimeias, diaphorètikès, delanoti zerantikès, dynameôs." On account of one or the other of these properties the use of coagulum is indicated by Galen in all fluxes, dysentery, cœliac flux (t. x., p. 169), hæmoptysis (t. xiii., p. 283), uterine hæmorrhage (t. x., p. 685). He recommends it in cases of epilepsy, and to preserve from the bite of serpents. One circumstance shows how little importance coagulum had in affections of the stomach,—namely, that although Galen sometimes speaks of this substance with reference to intestinal diseases, he does not say a word about it in the long chapters in which he treats of the stomach, its uses, and its diseases, with their treatment.—Tom. ii. ed. Chart. "Medicus," cap. xiii. p. 886; t. iv. ib., "De usu partium," p. 870; t. vi ib., "De discolution continua," pp. [illegible];

What a difference between this real Galen and the Galen of your fancy, such as you have depicted him in your "History of Pepsine"! "The attempt to turn the peculiar powers of gastric juice to advantage in medicine dates from remote antiquity. Pliny mentions the fluids of the stomach of sucking animals as a remedy in common use for a variety of purposes, such as curing disorders of the intestines, allaying the inflammation from spiders' bites, stopping bleeding from the nose, preventing snakes attacking you, and, in fine, against poison in general. Galen, arguing probably on physiological grounds, attributes a 'digestive' and drying power to it. He mentions having experienced in his own person the relief afforded by it to the weight at the epigastrium after drinking too much milk,[*] and advises a trial of it in abdominal disorders. He remarks that the stomach of one animal differs from another only in a degree of power. He gives a warning, also, that the boiling degree of temperature destroys its virtues, as we now well know; for he found that hens' and cormorants' stomachs when cooked were perfectly inert." (Practical Lectures on Pepsine, delivered at St. Mary's Hospital, by Dr. Chambers, and published in THE LANCET of Oct. 1st. 1857.)

I have deemed it necessary to transcribe your history, word for word, so that it may not be thought that to combat your opinions I have exaggerated the terms.

If you are not persuaded that each of your assertions has been overthrown, one after the other, by the simple reading of Galen, *scripta manent.* The documents relating to the question in dispute are fairly before the public.

I myself, four years before the publication of your history, had also written one. (*Moniteur des Hôpitaux*, No. 36, 1853, p. 285.) I therein rendered due homage to the translator of Spallanzani, Sennebier, who, with equal ingenuity and boldness, inquired, "Why not swallow the gastric juice of some animal?" I even omitted to mention the kind of timid retraction he makes when he afterwards adds: "I do not scruple to acknowledge the folly of these ideas." This retraction leads him on to say that at least the gastric juice is an antiseptic.

Sennebier could hardly lay the foundation of therapeutical digestion, for he was entirely ignorant that the gastric juice possessed a special ferment, pepsine. He believed that the gastric juice only existed on condition of containing the liquids which ooze from the small arteries; those that came from the œsophagus and mouth. Carminati, following in the same track, laid much more stress, in 1787, on the antiseptic property, so that he even ventures, in his great work, (Hygiene, Therapeutice et Materia Medica, Pavia, 1791, t. ii., p. 538,) to range gastric juice, as in its proper place, amongst antiseptic agents.[*] This error contributed still more than his ignorance of the nature of the gastric ferment in retarding the period when the discoveries of Spallanzani were destined to bear their fruits.

Mongiardini, whom I have particularly cited in my history, was, according to your statement, in the habit of treating indigestion with success by means of the gastric juice of the crow. Here, again, it seems to me that your pen has been led astray by your imagination. I stated, in 1853, that Mongiardini had administered the gastric juice of a crow to a person who digested with difficulty. Although he did not publish a series of facts sufficient to carry conviction with them—for you are aware that cases may be cited to confirm all kinds of opinions, true or false—I believe we may look in vain for any convincing, or even authentic, case of such success, which has only been rescued from oblivion after the lapse of seventy years; and, admitting the reality of the fact, I doubt whether at present we should succeed in reproducing it with the gastric juice of the crow. In 1852 these things were regarded as curious, and the healing art was, in this respect, in a state of infancy. In the opinion of the public, he who before Watt had not determined by observation and study, guided by a firm conviction, the cases in which steam could be advantageously employed, who had not supplied the means of obtaining a uniform force, of ascertaining and measuring its power before putting it into action, had not invented steam.

It must not be supposed that the inauguration of artificial digestion, and of pepsine as a therapeutical agent, ought to be judged by any other standard.

What precepts had been scientifically traced with respect to doses, constitutions, and varieties of disease before 1854? Before that date, what standard was there for judging of the force of the agent? What was the scale of the doses? What means of determining before employing them the uniformity of the action of each?[†] What collection of clinical observations, publicly made, had been given to the world? If all these proofs, all these rules, all these elements of judgment, were wanting previous to 1854, we must explain by this absence of every precise rule the reason of the non-vitality in which pepsine was placed; and in the succession of works that you have ignored, a list of which I subjoin, we have the real history of the inauguration of artificial digestion, and of pepsine as a therapeutical agent The following is the list:—

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t. x., ib., "De remediis parabol.," lib. i., cap. x., p. 598, and lib. ii. cap. xvii., p. 628; t. xiii., ib., "De comp. med. sec. locos.," lib. viii., pp. 559–595.

[*] This experiment made, according to you, by Galen *in his own person*, and the *pain* you are speaking of in your history, which was relieved by the administration of the gastric juice, I have been unable to discover mentioned in any part of Galen's works, whatever be the edition.

[*] This antiseptic property suggested the experiments of Boyer which you cite; but you may place in the class of exploded fables the idea that the gastric juice is a powerful lithontriptic; this I certify from experience. I feel convinced that Dr. Latham believed what he related to you; however, we are quite ignorant in France of what you know about France.

[†] This means is digestion performed by stewing with some kind of pepsine. The energy of the coagulation of milk by no means indicates the digestive force. In fact, acids and even plants, such as gallium verum, coagulate milk, and certainly they do not possess the properties of the stomach.

1854, Oct.—L. Corvisart "Dyspepsie et Consomption, Usage de la Pepsine."

1854, Dec.—Rilliet (of Geneva): "Sur l'Apepsie et la Dyspepsie," published in the "Revue de Thérapeutique Medico-Chirurgicale," Martin Lauzer, Paris.

1855.—Dechambre: "De l'emploi thérapeutique des Poudres Nutrimentives," in the "Gazette Hebdomadaire de Médecine et de Chirurgie," t. ii. p. 546.

1855.—Debont: "Des bons effets de la Pepsine dans la Diarrhée des Enfants," in "Bulletin Général de Thérapeutique Médicale," t. xlix. p. 513.

1855.—Lecointe: "Observation d'un Cas de Consomption ultime Traité par la Poudre Nutrimentive," same vol., p. 5.

1856.—E. Barthez: "De l'Apepsie par Indigestion répétée, et de son Traitment par la Pepsine," in "L'Union Medicale," p. 22. Paris.

1856.—Carlo Togi: "Degli Usi therapeutici della Pepsina," a work which obtained a prize at Milan. "Lib. Chiusi et Gazetta Medica Italiana Lombardia," Nos. 11, *et seq.*

1856.—Edward Ballard: "On Artificial Digestion as a remedy in Dyspepsia, Apepsia, and their Results." London, Walton and Maberly.

1857.—Thos. K. Chambers: "Experiments on Artificial Digestion," in The Lancet for May.

1857.—David Nelson: "Clinical Observations on the Special Application of Liquor Pepsiniæ in certain Diseases," in "British Medical Journal," February and March. This author, although omitting to mention all the publications that preceded his, and which he seems not to have been acquainted with, flatters himself that owing to his observations pepsine has taken up its merited rank.

1857.—James Ross: "Case of grave Disease and extreme Debility Successfully Treated by Pepsine," in "Edinburgh Medical Journal" for October.

1858.—Legros: "Observations à l'Appui des bons Effets de la Pepsine dans le Traitment des Vomissements, même opiniâtres de la Grossesse," in "Bulletin Général de Thérapeutique," t. liv. p. 97.

1858.—William Moore: "On Pepsine, its Efficacy in Cases of Dyspepsia and Imperfect Assimilation," in the "Dublin Hospital Gazette."

I conclude by requesting your permission, Sir, to repair a very important omission. You declare that the administration of pepsine has been much facilitated by an ingenious French apothecary, M. Boudault. This is true, Sir, and my opinion coincides the more with yours as this pepsine employed in therapeutics resulted from my labours with M. Boudalt, and as the formula was liberally published as soon as discovered by our united investigations, and made the property of the public with our joint consent. The only reason for calling it "Boudault's pepsine," and not "Corvisart's pepsine," (*poudre nutrimentive*,*) was simply a professional scruple on my part; both the apothecary and physician feel equally flattered by these details.

I have the honor to remain,
Your most obedient servant,
L. Corvisart.

August, 1858.

ON SOME POINTS IN THE THERAPEUTICS AND CLINICAL HISTORY OF ASTHMA.

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PART I.

GENERAL AND INTRODUCTORY CONSIDERATIONS. CLASSIFICATION OF THE REMEDIES OF ASTHMA.

It has always struck me as strange that asthma is a subject to which so little attention is given, and still stranger that it should be one on which such erroneous notions should prevail; but I suppose this last is due to the first, and that the little attention that is given to it is due to the fact of its being, in the majority of cases of its occurrence, more or less masked by organic disease,—to its tendency, even if pure, to merge into such disease,—to the comparative rarity of uncomplicated cases,—to the recondite nature of its pathology,—to its caprice and irregularities both in cause and treatment,—and to its unsatisfactory therapeutics, at least by the modes of treatment commonly adopted. But to me asthma is a most interesting disease: interesting in its phenomena, interesting very in its pathology, interesting as an example of the way in which pathology and treatment are bound up together, the way in which the one hangs and hinges on the other, and the other illustrates and interprets the one; and if veritable tractability adds interest to a disease, if the sense of the power of alleviating suffering and of predicting confidently certain results, lends a charm (as I think it does) to maladies that come under our care, then asthma is interesting in this point too.

Now I have just said that asthma is an interesting example of the way in which therapeutics hangs and hinges on pathology. What then, is the pathology of asthma—what *is* asthma? I think the best and shortest definition we can give of asthma, and one in which clearness and truth are not sacrificed to conciseness, is, that it is *the spasmodic stricture of an excretory duct.* We may look upon the lungs as a great pair of conglomerate glands constantly excreting carbonic acid gas and watery vapour; and this view involves no stretch either of anatomical or physiological truth: the structure of the lungs is, in all essential points, strictly that of a conglomerate gland, and the slight points of difference are merely dependent on the gaseous nature of the materials excreted. Of these materials, the bronchial tubes are the excretory duct or means of out-draught. The only other spasmodic strictures of excretory ducts that we are acquainted with are those of the gall-duct and urethra; but it is possible that all excretory ducts of considerable size may be the seat of spasmodic stricture, because they all of them contain organic muscle. In being, therefore, the seat of spasm, the bronchial tubes differ no more from the other excretory ducts than they do in possessing muscular walls. But in many and important respects asthma differs strikingly from all other spasmodic strictures whatever; in its suffering, its causes, its gravity, its treatment: and I think these differences have their explanation in the four following circumstances, in which the bronchial tubes are peculiar and unlike other excretory ducts:—

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* Aliments et Nutriments: Usage des Prises, Nutrimentives, by L. Corvisart. A Memoir read before the Academy of Medicine, Dec. 27th, 1858.

1. The vital and ceaseless function of which they are the seat.

2. The many and various sources of irritation to which their situation and function renders them obnoxious.

3. The delicate susceptibility to stimulus and proneness to contraction that their purposes in health render essential.

4. The number of organs and functions with which their wide-spread nervous connexions bring them into relation.

The mere enumeration of these peculiarities will at once suggest to the mind, without the necessity of illustrating them, the way in which they impart to bronchial stricture the peculiar features of asthma.

Asthma certainly does not suggest to one's mind the idea of spasmodic stricture; it suggests the idea of some severe lung-disease; and this superficial and *primâ facie* impression often makes the uninitiated consider asthma as an attack of inflammation of the lungs; indeed, I have known many cases in which medical men have made this very mistake. Nevertheless, asthma is, and is nothing more than spastic stricture of an excretory duct; that is its true pathological position, and its treatment is in entire accordance with this interpretation of its pathology.

The treatment of all diseases that are at once chronic and paroxysmal, aims at two objects—the relief of the paroxysm when it exists, and the destroying in the intervals of health that particular diseased tendency which calls the paroxysm into existence. And each of these objects—that is, the cure and prevention of the paroxysm—may be obtained in two ways: positively, by the application of certain remedial agents; negatively, by removing the exciting cause during the attack, and by preventing the exciting cause and removing the predisposing cause during the intervals. Now, asthma is one of these chronic paroxysmal diseases, and its treatment naturally divides itself into the treatment of the paroxysm and the treatment in the intervals of the paroxysms; and although the last is the real treatment of the disease, while the treatment of the paroxysm is merely the treatment of a symptom, yet in asthma the paroxysm is, potentially though not essentially, the disease itself, for it is its sole manifestation—the only source of suffering and the cause of those organic changes in the heart and lungs that asthma gives rise to, and that alone makes it formidable. The diseased tendency without the paroxysms, if we can conceive such a thing, might be disregarded—it would be a non-entity, for that which has no manifestations has no existence. If, then, we can in any degree retard, cut short, or mitigate the paroxysms, we in such degree abolish the disease, and diminish its suffering and its morbific tendency. But while I thus assert the great importance of the treatment of the asthmatic paroxysm, I must admit that the treatment of the disease in the intervals is the paramount part of its therapeutics; and I must confess also, that I think it has not had sufficient attention given to it, and that the efforts of the physician have been too exclusively directed to the mitigation of the sufferings of the paroxysms when they have arisen. We may, perhaps, see at once some explanation and some excuse for this when we remember, on the one hand, how occult the essential diseased condition in asthma is, how often it eludes detection altogether, and how perfect apparently is the health of the asthmatic in the intervals; and, on the other, how urgent are the symptoms when they arise.

The remedies at our command for relieving an attack of asthma, as it is called; for cutting short, that is, or mitigating asthmatic dyspnœa, appear to me to be of five kinds.

a. Those which remove the exciting cause.

b. Those which diminish nervous irritability—sedatives.

c. Those which directly lower nervous and muscular power—depressants, contra-stimulants.

d. Those which exalt the activity of cerebro-spinal and voluntary nervous action, and proportionally diminish the organic and reflex—stimulants.

e. Those which in some way or other diminish or annihilate the asthmatic tendency—whose *modus operandi* is obscure, which we may perhaps call *specifics*, but which may possibly act as stimulants or sedatives.

It will at once be seen that the three first classes of remedies—those which remove the exciting cause; those which diminish nervous irritability, sedatives; and those which directly lower nervous and muscular power, depressants, contra-stimulants—are exactly those to which we resort in the treatment of spasmodic stricture in general.

As an example of the first class of remedies—those which remove the exciting cause—I may mention emetics, which, by emptying the stomach of an undigested meal, for instance, may remove the immediate cause of the attack.

As an example of the second—*sedatives*, I may mention stramonium, which, by diminishing the irritability of the nervous system, destroys the efficiency of the irritant—renders the exciting cause impotent, that is, without removing it.

As an example of the third—*depressants*, I may mention tartar-emetic, or tobacco, which, by directly lowering nervous and muscular force, relax bronchial spasm just as they would a hernial strangulation.

As an example of the fourth—*stimulants*, I may mention strong coffee, and violent emotion, which, in obedience to the well known laws of relation between reflex and voluntary nervous action, appear to diminish the activity of the organic nerve and muscle concerned in bronchial spasm, in proportion as they exalt that of the brain and of the nerve and muscle of animal life in general.

As an example of the fifth—*specifics*, whose *modus operandi* is obscure, I may mention the airs of certain localities.

There are two ways in which the remedies for asthma may be exhibited and brought to bear on the nervous and muscular system of the air-passages; either *indirectly*, by being introduced into the blood, as in the ordinary way of swallowing, and gastric absorption; or absorption by the mucous membrane of the mouth, as in smoking; or, secondly, *directly*, by being applied to the bronchial tubes themselves, as by inhalation. This last has, I think, especial advantages; it has, indeed, all the advantages of local treatment—its concentration, manageableness and rapidity of result; the air-passages are peculiarly favorably placed for this topical medication, and the movements of respiration supply us with a natural and easy means of conveyance. I believe that much more is to be done in this way for the treatment of asthma than has yet been attempted. Of the remedies thus exhibited, that which has had the longest and fairest trial, and has obtained the greatest reputation, is one which will form the subject of a future communication—the inhalation of the fumes of burning nitre paper.

Montague-street, Russell-square, July, 1858.

NOTES OF A CASE OF ATONY OF THE INTESTINAL CANAL, RESULTING IN RUPTURE OF THE COLON, PERITONITIS, AND DEATH.

By N. Bethune, M.D.

E. S——, a man of spare habit, aged thirty-two, addicted to intemperance, who had been subject from infancy to frequent attacks of diarrhœa and dysentry, observed that his bowels were gradually becoming inactive about ten days before I saw him on the night of the 6th of May last. He habitually smoked and *chewed* tobacco to excess, often swallowing the saliva. Having an aversion to call in a medical man, he took the case into his own hand, and plied himself with the more ordinary purgative substances, finally taking a large dose of croton oil; all, however, with no effect, the bowels remaining passive. When I first saw him, he had had no relief for a week at least; yet he was cheerful, free from pain, complaining merely of a sense of distension from the accumulated contents of the intestines; the abdomen was tense and highly tympanitic, and no dulness could be detected in any spot in the course of the alimentary canal to lead to the suspicion that the obstruction was due to impacted fæces; the pulse was unaffected; the stomach very irritable, the ejected matters having at times a fœcal odour. Being unable to detect any hernial tumour, there being no fever, no tenderness in any part, in fact, no inflammatory symptoms, castor oil and other purgatives were again administered in succession, but them he rejected by vomiting; calomel, also, in large and small (repeated) doses, with no effect. Full doses of opium at night succeeded in procuring rest for three or four hours, and relieving oppression. Copious injections of tepid water, soap-suds, turpentine, and ox-gall, introduced by means of the long-tube, brought away small quantities of semi-fluid fæces, and were almost invariably followed by free discharges of gas. Still the distension returned, and as the stomach became more settled, strychnine was repeatedly given in minute doses every second hour for three days, with this good result, that the oppression was relieved in a marked degree, while the emetic continued to bring away more or less gas at each administration. Matters continued in this state till the evening of Sunday, May 16th, when, after violent straining a stool, and the exertion of getting into bed, he suddenly complained of pain in the abdomen, which rapidly increased in severity, while the features shrunk, the pulse rose to 140, the skin became cold and clammy, and, after a night of intense suffering, he expired on the morning of the 17th, at five o'clock, the bowels not having acted for eighteen days.

I examined the body twelve hours after death. The abdomen was enormously distended and tympanitic. On opening the peritoneal cavity, a quantity of gas escaped, with a large amount of turbid fluid mixed with fæcal matter. The small intestines exhibited the bulk of the normal colon, while the latter showed a corresponding amount of dilatation; both were coated in parts with recent lymph, and were of a dull-red colour. The contents were gas, and a yellowish pultaceous matter, perfectly free from odour. The course of the intestines was traced from the duodenum downwards, and on reaching the bend of the colon, between the ascending and transverse portions, I found a circular opening sufficiently large to admit a goose-quill, and with an extremely thin peritoneal edge, through which the contents of the intestines had escaped into the sac. On examining the orifice closely, it was observed to be seated in the centre of an old cicatrix of large size.

This appears to have been a case of pure atony, or rather of actual paralysis, of the muscular coats of the entire intestinal tube, from the stomach to the commencement of the rectum. It is a question how far the patient's inordinate habit of tobacco chewing and smoking may have tended to this remarkable impairment of muscular action. The rupture of the colon was evidently an accidental circumstance after violent straining, and would not, in all probability, have occurred if the intestinal wall had been of uniform thickness.

Toronto, May, 1858.

ON A CASE OF ANEURISM OF THE AORTA.

By Walter Sumpter, M.D., Cley, Norfolk.

Mrs. R. S——, of Blakeney, Norfolk, an anæmic-looking female, consulted me on May 16th, as to the cause of a constant fluttering in the throat, accompanied by dyspœna, cough, and temporary aphonia. On inquiry I found that the patient had been ailing for two years, but felt much worse after a long fatiguing walk about nine months since, during which walk she felt a sharp pain in the chest, accompanied by a violent fit of coughing, which weakened her so much that she could scarcely crawl home. No expectoration, however, took place. On making a physical examination of the thorax, a peculiar pulsation over the right sterno-clavicular region was evident, and on applying the stethoscope, the impulse was imparted to that instrument, jerking it forward with each systole of the ventricles. On applying the ear, the peculiar "whizzing" sound was heard, and aneurism of the aorta was evidently my diagnosis, and I considered it my duty to forewarn my patient's friends of her highly precarious state. I prescribed digitalis, combined with other sedative and laxative remedies, and enjoined absolute rest. I was several times summoned, as she was thought to be dying from the intense dyspnœa that temporarily existed; but she lingered on for several months, when a violent paroxysm of coughing closed the scene.

At the necropsy I discovered that the rupture of the aneurism had taken place within the pericardium. The heart was in a state of fatty degeneration, and much enlarged, weighing fifteen ounces.

The peculiar features in this case are the absence of hæmoptysis and pain, with no general disturbance of the circulation, and no rupture of the artery itself.

July, 1858.

ON A CASE OF PUNCTURED WOUND OF THE UPPER EYELID, PENETRATING DEEPLY INTO THE ORBIT.

By George Russell, Esq., M.R.C.S.

M——, a little girl, aged seven, was brought to my surgery on the 1st of December last. On examination, I found a vertical wound on her forehead of about two inches in length, which terminated inferiorly in a punctured wound of the upper eyelid, immediately below the orbital ridge. From the wound in the eyelid protruded a mass of fat, cellular tissue, &c., of the size of a nut. This I transfixed with a tenaculum, and sliced off. I adopted this course, as I foresaw great difficulty in returning it on account of the great resistance my young patient seemed determined to make, and I was also afraid that if I succeeded it would slough. I closed that part of the wound in the eyelid with a suture, and that on the forehead I brought together with a strap. With difficulty, owing to the swelling of the lid and the restlessness of the patient, I obtained a glimpse of the cornea, and it appeared to be uninjured. After the operation I ordered her to be placed in a bed with a very high pillow, in a darkened room, and a light fold of lint placed over the eye, which was to be kept damp with an evaporating lotion, and to take three grains of calomel, followed by small doses of sulphate of magnesia every four hours. However, as no amount of coaxing would induce her to take the medicine, and being afraid to have recourse to harsh measures, lest she should struggle and cry, and so cause hæmorrhage in the orbit, I contented myself with employing darkness, cold applications, and spoon diet. A few hours afterwards I saw her again, when she appeared drowsy, and vomited two or three times; pulse 80. I ordered her to be constantly attended, and kept in the same position, with the head and shoulders well elevated, and on the following morning the drowsiness and sickness had passed off, and she had slept comfortably for some hours.

The bowels were spontaneously evacuated on the fourth day. On the same day I took out the suture, and found the wound healed. Some time elapsed before she could open her eye, owing to the swelling of the lid. This has now subsided, and her sight is perfect; but the eye seems more prominent than its fellow. There is slight ptosis and external strabismus; but I am in strong hopes that time will remedy these defects as a gradual improvement is quite apparent. Upon inspecting the instrument which caused the injury, I found it to be a rusty, blunt iron spike, fourteen inches in length and one inch and three quarters in circumference. This penetrated the orbit to the depth of two inches and a half. The accident occurred by the child pulling down upon herself a piece of timber in which the spike was fixed.

The above case shows what a slight amount of local or constitutional irritation may occasionally follow a severe wound in so delicate a situation; and I am inclined to think that position, in cases of severe injuries of the head, is as well worthy of consideration as it is in treatment in those of the extremities.

July, 1858.

REPORTS OF CASES OF

RESECTION OF THE HEADS OF THE PHALANGES OF THE FINGERS AND OF EXCISION OF THE ENTIRE UNGUAL PHALANX.

By E. J. Chance, F.R.S.C.,

SENIOR SURGEON TO THE METROPOLITAN FREE HOSPITAL AND CITY ORTHOPÆDIC HOSPITAL.

Under the head of "Clinical Records," in The Lancet, February No. p. 258, there is a case of "Resection of the Heads of the Phalanges of the Right Forefinger," in which the treatment adopted is spoken of as "a proceeding which it would appear is somewhat novel in its application to diseases of the joints of the finger—resection of the articulation;" and the writer goes on to state, "in the treatment a false joint will be sought for. We shall watch the case with some degree of interest."

Judging from these remarks that "resection of the heads of the phalanges" is in reality "a somewhat novel" practice, and therefore of more present interest than I had deemed it, I am induced to lay before the readers of THE LANCET an account of three cases in which I adopted such a course of treatment with perfect success in the years 1853 and 1856. The first case in which I adopted this plan of treatment, and which, from its success, led me to extend the practice to *diseased* joints of the fingers, was an unreduced dislocation of the extreme phalanx of the thumb, which had existed two years.

In this case, not only had the bone been dislocated, but the extremity of the first phalanx forced through the skin in the front of the thumb.

The condition of the part when I first saw it was as follows: The point of the thumb projected backwards nearly at a right angle, and was firmly retained in that position. The articulating surface of the ungual phalanx rested on the back of the digital extremity of the first phalanx, and this latter part formed a protuberance on the front of the thumb, which could be distinguished by its pully-like shape, through the tense skin. As the extremity of the thumb pointed directly backwards, the protuberance formed by the digital extremity of the first phalanx in front constituted the *only* part that could be opposed to the fingers in grasping, &c., and as the skin and cicatrix over this protuberance were so exquisitely tender that the slightest pressure on them caused intense pain, from its being brought to bear upon the misplaced nerves, the entire hand was comparatively useless, and the patient, who was a housemaid, was compelled, on that account alone, to give up servitude and become dependent on her friends. Under these circumstances, she applied at the City Orthopædic Hospital in 1853. As I found reduction entirely out of the question, I determined, at the suggestion of my friend Mr. Pollock, and with the approval and assistance of my colleague, Mr. N. H. Stevens, to remove the head of the first phalanx.

The operation was performed by raising a flap on the front of the thumb, and sawing off that portion of the head of the bone which prevented the ungual phalanx from taking its proper position. But little bleeding ensued. The part was afterwards put up, in a slightly flexed position, in a splint made of a piece of card. The wound healed readily, and we had the satisfaction a fortnight afterwards of witnessing a perfect cure. The splint was worn for some weeks afterwards for safety. About three months after the operation, as the joint was firm, slightly movable, and the thumb *could be used with perfect freedom and without pain*, my patient accepted another situation as housemaid. I have seen her every five or six months since, and I can report that a few days back she was still in a situation, and her thumb quite well.

The foregoing case having terminated so successfully, I determined to try the same mode of procedure in a case of *caries* of the heads of the phalanges; and in January, 1856, I had an opportunity of so doing, as Mr. Pollock placed under my care a case that appeared to him appropriate for such treatment. In this case the patient was a labourer at a brewhouse, and had had his hand severely injured by a barrel falling on it. The extreme joints of the third and fourth (middle and ring) fingers were both carious, the bones grating perceptibly against each other whenever they were moved; and there was an opening into the joint of the fourth (ring) finger, but not in that of the third finger. In this case I made the flap on the back of the finger, and removed, with a fine saw, a *thin* slice of the head of the second phalanx of each diseased finger, and a like portion from the articular extremity of the ungual phalanx of the fourth finger. The articular extremity of the ungual extremity of the third finger was not carious, and therefore not removed. The parts were then put up, as in the former case, on splints made of a piece of card; but in this case the fingers were kept *firmly and fully extended.* This case was also well in a fortnight; but, as in the former instance, the use of the splints was continued for some months, to prevent the contraction of the flexor tendons. The operation was performed in March, 1856, and in the following September the man resumed his laborious manual occupation at the brewhouse. I saw him a week ago, when his hand was still quite well, and he then informed me that he had been at work constantly from the time he returned.

In the foregoing cases it will, without doubt, have been noticed that in each the hand was so materially damaged as to deprive the individual of the power of following his or her ordinary avocation of manual labour, and that in each case the result was so completely successful as to restore that power, and to enable the one to obtain her own livelihood; and the other to support himself and family. "Resection of the *heads* of the phalanges of the fingers," is therefore, *in appropriate cases*, a procedure in every way *worthy of attention and adoption.*

As my object, upon the present occasion, is chiefly to draw attention to the success attending this mode of treating injuries, &c., of the fingers, and not to discuss any particular mode of removing the diseased parts, I shall not enter further upon this latter subject than to observe it must be evident the method adopted to expose the bone will of necessity vary in each case, as exemplified in those I have narrated; but, I cannot refrain from advising that the removal of the bone itself, *the essential part of the operation*, should be *always* made by a very fine (watchspring) saw, and not with the bone-nippers, inasmuch as however sharp the bone-nippers may be, they of necessity inflict an amount of *compression* upon the healthy bone, which, considering the small size of the shaft of the phalanges, would be sufficient to prevent the ready healing of the parts, and thereby tend to frustrate the end proposed by the operation.

In the three operations I have described, two consisted of a removal of a portion of one bone only—viz., of the head of the second phalanx; and one of a portion of the articular extremity of each of the bones composing the joint. In this latter instance the bones have become nearly anchylosed; in the former, they permit of a slight degree of motion. This difference in the termination in the two fingers of the same case brings us back to the consideration of the point mooted in the words "in the treatment a false joint will be sought for" as formerly quoted, and it likewise gives rise to the following practical questions—viz., 1st, whether a false or an anchylosed joint in these cases is to be preferred; and, 2ndly, whether it is within our own power to secure the one or the other.

The reply to the first of these questions will, doubtless, be different in different cases and under different circumstances in life; for my own part, and as regards the man whose case I have narrated, I think it would have been better for him if both the joints had been fixed. In the case of the girl, there is positive motion, but I do not consider it of sufficient *extent* and *freedom* to weigh much in the consideration of the matter. There is, however, another consideration of far greater importance—viz., the angle at which the joint is allowed to become fixed.

With respect to the second question, I am of opinion that *it is* in our power to secure either the one or the other.

It is manifestly obvious that this operation—"resection of the *heads* of the phalanges"—is only adapted to those case in which it is the *articular extremity alone* of the phalanges which requires to be removed, and in such cases the less removed, so that *it answers the end proposed*, the better. There is, however, another class of cases of much more frequent occurrence, which borders so closely upon the former, that I am led to append a few observations upon it, and the more so as I am not aware that the practice I would advise is noticed in surgical works. I allude to the carious condition of the *extremity and shaft* of the ungual phalanx, which is so frequently seen as the result of neglected or wrongly treated onychia; and, occasionally, of mechanical injury to the finger, which I have been in the habit for years of treating by "excision of the *entire ungual phalanx*."

Such cases as these are of frequent occurrence amongst the out-patients of hospitals generally. I have had many such at the Metropolitan Free Hospital. When such a case is first seen, the end of the finger is considerably enlarged, there is an opening on the front or side, leading down to the carious bone, which can be immediately detected by a probe; and from the orifice of the wound, in all probability, a rugged portion of the diseased flexor tendon will be seen to protrude. If such a case as this is left to itself, and if the caries is *confined to the ungual phalanx alone*, after a *considerable period of time* (weeks upon weeks), the lateral ligaments become destroyed, and the bone comes away of itself; or if, on the other hand, the caries passes to the head and shaft of the second phalanx, it then causes the loss of the entire finger.

The treatment that I would recommend as the result of my own personal experience is the early removal of the carious ungual phalanx. This proceeding is easily accomplished by enlarging the existing wound, and dividing the lateral ligaments. After the removal of the bone, the sides of the tip of the finger should be slightly compressed against each other, and the part retained in an extended position. The wound will heal readily, and in this process it will be found that the finger-nail will be drawn down more or less across the top of the finger, according to the amount of destruction the parts in the front of the finger have undergone by the previous sloughing. This drawing down of the finger-nail is, without any doubt, unsightly; but however unsightly it may be, or to whatever extent the nail may be drawn down, and I have seen it in cases that have been left to themselves nearly flat on the end of the finger, the extremity of the finger possesses a degree of sensibility, and the entire finger a degree of mobility that is not possessed by the extremity of the stump of a finger mutilated by amputation, and it is, therefore, of infinitely more service to a patient in any circumstances of life, but especially so to the poor and labouring man.

Old Broad-street, 1858.

SINGULAR CASE OF HYPERTROPHY OF THE RIGHT LOWER EXTREMITY, WITH SUPERFICIAL CUTANEOUS NÆVUS OF THE SAME SIDE.

By John Adams, Esq., F.R.C.S.,
SURGEON TO THE LONDON HOSPITAL.

George P——, aged nineteen, was admitted into the London Hospital under my care, in consequence of a contusion of the right knee. The accident was not severe, but the case was remarkable from the peculiar condition of the limb. The state was congenital, and the mother ascribed it to a fright during pregnancy. The right lower extremity was much larger, and in nearly all respects more fully developed than the left, the latter being of the ordinary size of a boy of the stature of the patient. This fact is abundantly proved by the measurement of the two limbs at different parts, which gives the following results:—

	Right. In.	Left. In.
Entire length of limb	30	28½
Circumference over the malleoli . .	10	9½
„ of the calves of the legs	13½	13½
„ of junction of middle and lower third of thigh	16½	15½
„ of upper third of thigh	20	19
„ of nates	13½	11¾

A large superficial cutaneous nævus occupied the whole of the limb; it commenced opposite the last dorsal vertebra, and extended in continuous patches as low as the toes; it was but little apparent over the nates, was absent in the skin of the penis, but completely covered one half of the scrotum. It was most accurately defined by the mesial line, even to the raphé of the scrotum. It was exceedingly superficial, so as to constitute only a stain of a bluish colour; and, on pressure at any part, the blood could be squeezed from the minute capillary veins of the cutis which constituted the nævus. The femoral and all the other arteries of the limb which are susceptible to the touch were considerably enlarged.

This is one of a class of cases to which the term hypertrophy is applicable. In other words, the whole of the tissues of the right lower limb had, probably prior to birth, assumed an increased development, which had been maintained during the life of the individual; and the limb, having assumed this increase of size, had continued to grow *pari passu* with other parts of the body, so as in all probability still to maintain a ratio of development only in accordance with that of other parts of the system.

This case affords a striking contrast to one of increased development of the vascular system of the right lower limb, which occurred in a young man who died two years ago in the hospital, and whose case has been published in the medical journals. In this latter case the vascular system was developed to an enormous extent, and at the expense of the other parts of the limb—a condition probably due in a great measure to inaction of the muscles, &c; and in this case the hypertrophied state of the vessels continued to increase, and the case terminated fatally in consequence of the growth of a vascular nævus (aneurism by anastomosis) which had formed in the interior of the os calcis, and which gave rise to ulceration and fatal hæmorrhage.

In the case now under consideration, no inconvenience resulted to the free movements of the limb; but it is impossible to say that at any future period the vessels may not assume a further increase of size, so as to lead to some ulterior mischief.

St. Helen's-place, July, 1858.

ON A CASE OF IMPERFORATE ANUS, WITH A PECULIAR DEFORMITY.

By Richard Barwell, Esq., F.R.C.S.,

ASSISTANT-SURGEON TO CHARING-CROSS HOSPITAL.

On the 2nd inst., a child was brought to me, aged three days, with an imperforate anus. The anus was distinct externally, leading into a cavity lined with mucous membrane, which ended at the depth of a third of an inch, in a cul-de-sac. I operated with a narrow bistoury, passing it in the ordinary course of the rectum, a little to the left. However, although I pushed the knife inward for two and a half or three inches beyond the blind pouch, no passage was procured. The child died that night, and on the following day, with the assistance of Mr. Skeggs, of St. Martin's-place, to whom I was indebted for the case, I examined the condition of parts.

The abdomen was of course enormously distended, and on turning back its parietes, there was evident what appeared an ascending, transverse, and descending colon, apparently quite natural, but that it was greatly distended, and that the transverse portion was lower than usual. However, on tracing this intestine from the right to the left flank, it was found that, instead of forming at that spot a sigmoid flexure, it seemed to turn upon itself and pass upward again, behind the portion just described. On closer examination, it was discovered, that this, apparently normal, colon was rather some enormity; and on tracing the small intestine down to its termination, it was seen to end in a normal colon (placed behind that which first looked like one) provided with evident ileo-cæcal valve and vermiform appendage. From this place the colon was natural to the spot where the sigmoid flexure should have begun, and here it turned upon itself forwards, and ran up again in front of the descending portion to the left lumbar region, then ran across the abdomen in front, and a little below the true transverse colon, descended on the right side, and ended in a pouch in the right flank, with a pointed cæcal end in the pelvis, behind the bladder, about half an inch distant from the external oval pouch and to its right side.

A probe was passed along the track of the bistoury, which was found to have run in the normal direction and axis of the rectum, and to have missed the distended end of the intestine by a very little; in fact, in one place to have wounded its peritoneal coat, and it was only this hitherto unrecorded position of parts, with the rectum running to the right side, that prevented the passage being established. It is curious to observe, that had the mother permitted me to perform an operation for artificial anus, as I proposed, I should have opened the right groin, and have come upon the very last end of the intestinal canal.

Old Burlington-street, August, 1858.

REPORT OF A CASE OF PLACENTA PRÆVIA, IN WHICH TURNING WAS SUCCESSFULLY RESORTED TO IN EXTREME EXHAUSTION.

By Marshall Weir, Esq., M.R.C.S., Dromore.

On the night of the 16th January I attended, in company with two other gentlemen, Mrs. G——, aged thirty, in labour of her fifth child at the full period of gestation. The labour was complicated with placental presentation. I had seen her early that morning in the absence of Mr. Graham, her ordinary medical attendant, and understood that during the preceding four weeks she had suffered from occasional and severe floodings, unaccompanied with uterine pains, and that on the previous night especially she had lost a very large quantity of blood. At the period of my visit there were no very urgent symptoms; the hæmorrhage had ceased; she had no pains, and her pulse was pretty full and steady; but she was pale and alarmed about her condition, and complained of slight rigors.

On examination, I found the vagina almost filled with clots; the os uteri, which in this case lay unusually high, somewhat larger than a shilling, not very rigid, and overlaid with placenta, the presentation of which could be easily distinguished. No hæmorrhage followed the examination; nevertheless, I thought it advisable to plug the vagina, which I did with a silk handkerchief, and applied a cold wet cloth over the vulva and lower part of the abdomen. On leaving, I urged the necessity of having her medical attendant called immediately on the occurrence of either labour pains or flooding. In consequence he was summoned during the afternoon, when there was slight oozing, but no pains; he did not think it necessary to remain.

At one o'clock A.M. I received a hurried message to say that she had been taken suddenly ill, and that Mr. Graham was out of town, and could not attend. Knowing the case to be a serious one, I requested the assistance of Mr. Hawthorne. On our arrival, the distance being a mile and a half, we found her very much exhausted; face completely blanched, and features sunken; extremities cold; pulse 110, very weak and fluttering. Labour pains had commenced about two hours and a half previously, accompanied with a few gushes of fearful hæmorrhage, when the uterus acted strongly; these by degrees merged into a slight draining, which continued until a short time before our arrival. The bed appeared quite saturated, and the vagina filled with coagula. The os uteri was open to the size of a crown-piece, and dilatable; the pains were continuing, though feeble, and the bleeding had ceased. She was unable to raise herself in the bed, and could only speak in a low tremulous whisper.

The question was, whether we should at once deliver by turning, or detach the remaining portion of the placenta and leave the fœtus undisturbed until some degree of reaction should take place, or evacuate the liquor amnii and allow the head to press more firmly on the cervix, or abstain from manual interference altogether and merely watch the case closely so long as the hæmorrhage did not recur. The last-mentioned course was chosen, inasmuch as the exhaustion was too great to afford much hope of her bearing the shock of turning; and, having this operation in view, provided it should be deemed necessary when reaction had taken place, evacuation of the liquor amnii would not have been advisable; and as to detaching the placenta, the necessity for that proceeding, admitting its propriety, did not seem pressing, as the hæmorrhage had already ceased; besides there was a chance of renewing the bleeding, and a certainty of killing the fœtus. Some hours were spent after this in assiduous efforts to overcome the exhaustion; stimulants were administered largely and frequently, but she presented no appearance of rallying; on the contrary, the symptoms of prostration became more marked and formidable; frequent fainting became a prominent symptom; the pulse at times was imperceptible at the wrist; there was general pallor and coldness of surface, rapid and laboured respiration, much tossing of the head about in her efforts to breathe, loss of vision, and delirium.

At this period Mr. Graham arrived, but only to witness the patient dying, apparently; as delivery by any method seemed out of the question, except by the natural efforts, and this desirable result was not at all likely, as uterine action had almost entirely ceased, although ergot had been given in a full dose.

Considering the persistent and progressive character of the exhaustion, notwithstanding the plentiful supply of stimulants and the absence of any external hæmorrhage, we became apprehensive that bleeding might be going on internally. With this apprehension I again made examination, and found the os completely dilated, and the left margin of the placenta entirely detached, above which the membranes could be felt presenting, but bulging only very slightly. I proposed to my colleagues that we should take advantage of the favourable state of the parts and deliver her at once, considering it her only chance, as she appeared to be sinking rapidly. They at first expressed their want of faith in such a proceeding under the circumstances, and their fear of seeing her die during the operation. However, we must either stand by and allow her to die undelivered, or make an attempt to save her and run the risk of her sinking under the shock.

Having stated the case thus to her husband and friends, their consent was obtained, and the patient herself once whispered her willingness to run the risk of any measure we thought necessary for her safety, as she felt she was dying. The delivery was consequently dispatched in a few minutes, and a large female child born alive; the placenta came away immediately, no hæmorrhage followed, and the uterus contracted pretty firmly, in which act it was assisted by suitable compresses and bandage. She bore the shock wonderfully well, and was able a few minutes afterwards to express her comfort, and ask for a little whisky without any water, which she got, and it had an excellent effect. She remained extremely weak for a few days, but gradually rallied, and ultimately made a good recovery.

The chief points of interest in this case were the suddenness of the prostration, its persistence, notwithstanding the complete cessation of external hæmorrhage and steady application of restoratives, and the success as regarded both mother and fœtus attending the operation of "turning" when the patient was to all appearances moribund. Authors in general have expressed their views on this point very decidedly: one, in speaking of a case of extreme exhaustion, says, "if you were at once to turn the child, the fate of the patient would be sealed." No doubt there may be statistical data for making this a rule in midwifery practice, but it is no less true that, like most other rules, it may have its exceptions.

ON EXCISION OF THE TONGUE FOR CANCER.

By James Syme, Esq.,

PROFESSOR OF CLINICAL SURGERY AT THE UNIVERSITY OF EDINBURGH.

There are few diseases more painful to suffer or more distressing to witness than cancer of the tongue. The concurrent testimony of all experienced practitioners is decidedly unfavourable to operative interference by removal of the diseased part from its never affording permanent relief, and generally exciting, instead of retarding, the morbid progress, while all the means of palliation are extremely uncertain and inefficient. In circumstances so desperate any practicable measure affording a reasonable prospect of relief would certainly be warrantable; and under this impression I have lately tried the effect of extirpating the whole organ. As the disease frequently exists for a long while without extending beyond the tongue, and yet rapidly re-appears after the affected part has been cut freely away, there seemed reason to think that if the whole texture showing this disposition to morbid action were removed the patient might escape future trouble. Some reports had reached me of this having been done by cutting into the mouth under the chin, and then completing the operation by means of either a knife or the écraseur. But feeling assured that it was impossible to accomplish the object fully and satisfactorily through the imperfect access thus afforded to the root of the tongue, I resolved to divide the jaw at the symphisis, and then draw the two halves aside so as to get room for accurate dissection and ligature of the vessels.

G. S——, aged forty-seven, a shoemaker, was admitted into the hospital on the 11th of November, 1857, suffering under extensive cancer of the tongue, which was diseased throughout its whole extent, except towards the root. He stated that only five months had elapsed since the commencement of his complaint, or, at all events, since his attention was first called to it. There was no glandular swelling, or any other sign of disease.

On the 9th of December, I made an incision through the lip, and extended it down towards the os hyoides, then sawed through the thick part of the symphisis, and completed its division by cutting pliers, next had the two halves held aside while I dissected backwards, so as to cut and tie the lingual arteries near he cornu of the os hyoides, and finally detached the tongue closely from the body of this bone. The edges of the wound were then brought together, and the patient walked stoutly to bed. Food was supplied by the injection of milk and beef-tea through a tube introduced into the œsophagus, and everything went on so favourably for several days that I entertained no doubt as to the patient's recovery. But on the fourth day he began to complain of uneasiness in his chest, had a quick pulse, and became feeble. These unpleasant symptoms rapidly assumed a still more serious aspect, and terminated fatally on the seventh day. On dissection, the wound, larynx, and trachea were found in a satisfactory state; but the lungs were thickly interspersed with small indurations indicative of recent inflammatory action.

In considering this case, I felt at some loss to determine whether the fatal issue had necessarily resulted from the operation, or was owing to circumstances that admitted of prevention. The patient was ascertained to have been addicted to habits of intemperance. The wound had been healed throughout its whole extent, so as to leave no room for the escape of discharges from the fauces, and from an early period after the operation experiments had been tried on the power of deglutition, with the effect of exciting a great deal of sputtering and cough. It seemed not improbable that, but for these unfavourable circumstances, the operation might have proved successful, and therefore, although certainly having no great desire to repeat it, I did not feel entitled to decline doing so should a proper case present itself.

A few weeks ago I received an application from the Hospital at Northampton to admit a patient, who appeared a very suitable subject for the purpose. He was fifty-eight years of age, a remarkably respectable, healthy-looking man, without the slightest sign of glandular disease. He had suffered for nearly six years from disease of the tongue, and in the early part of last spring had undergone an operation by ligature in the Northampton Hospital. In consequence of the disease returning, he afterwards went to London (Guy's Hospital), where no operation was performed, but some strong applications were employed. He then went home, with the tongue greatly swelled, and diseased throughout its whole extent, except towards the root, where the texture retained its ordinary characters, so far as could be ascertained by the finger.

On the 31st of July, I performed the operation precisely as on the former occasion; but instead of closing the wound throughout its whole length, left about an inch of it open at the lower part, and inserted a piece of lint to prevent adhesion. I also directed, that no food should be given except by injection through a tube. Again things went on favourably for a few days, and again I entertained sanguine expectations of success; but on the evening of the third day, symptoms of the same alarming character as in the first case showed themselves, so that next day I saw there was no hope, and felt prepared for the fatal result, which took place on the following day. On dissection, the air-passages were again free from signs of disease until they reached the lungs, where there were extensive indications of recent inflammation.

In both of these cases it was manifest from inspection of the mass removed that no other operation could have accomplished complete extirpation of the tongue, and unless this were done, no better result could be anticipated than from the partial removal, which has always been found so useless and objectionable. On the other hand, I felt satisfied from the similarity of the symptoms and result, that the operantion, if not certainly fatal, must be one of extreme danger; and as even in the event of success, the permanency of relief would still admit of question, I think there should be no hesitation in deciding against the repetition of this procedure. In promoting the progress of surgery, it is hardly of more consequence to determine what is expedient than to ascertain what is not expedient; and I venture to hope, that the experience now related may not prove useless by saving others from the disappointment which I have myself experienced.

Edinburgh, August, 1858.

REPORT OF A CASE OF OVARIAN DROPSY, WITH MALIGNANT DISEASE OF THE UTERUS.

By G. Vernon Driver, Esq., M.R.C.S

Jane C——, widow, aged thirty-nine years, of a swarthy complexion, had been married many years, but had no family. She consulted me in the month of April, 1851, for swelling and pain in the left iliac region, attributed to a violent strain or "rick" caused in an attempt to save a caged bird from falling out of window, and "has never been easy since." She had also enlargement of the mammæ with milk, slight febrile disturbance, and an accelerated pulse. The catamenia were regular, and on examining per vaginum nothing abnormal was detected. Leeching and the usual course of treatment were carried out with little more than temporary relief, as fluid gradually formed, and in March, 1852, I tapped her for the first time, from which she recovered so well as to be up and stirring on the third day. Owing in some degree to that stern decree, "necessitas non habet leges," and her own instinctive feeling that gentle exercise was her best dose, it followed that the bowels were generally relieved on about the fourth day. I operated upon her thirty-four times, the quantity of fluid and the intervals between the tappings varying, as will be seen by the subjoined table; and she recovered equally well from them all, with the exception of the last two, when symptoms of acute inflammation of the tumour, which had attained a considerable size and a central position, set in, with almost total obstruction of the bowels, and constant vomiting of a dark green bilious matter, from which time she gradually sank.

Date of Operations.	Quantity.
1852.—March 23rd . . .	10 quarts.
June 24th . . .	10 „
September 16th .	6 „
December 13th .	10 „
1853.—June 13th . . .	14½ „
1854.—February 13th . .	18 „
May 11th . . .	18 „
August 11th . .	21 „
October 23rd . .	13 „
1855.—January 9th . . .	15½ „
March 6th . . .	12 „
May 21st	13 „
July 11th . . .	18 „
1855.—August 27th . .	17 quarts.
October 4th . . .	12 „
November 26th .	13 „
1856.—January 14th . .	13 „
March 3rd . . .	12 „
April 9th . . .	13 „
May 10th . . .	16 „
June 27th . . .	12 „
August 15th . .	10 „
September 13th .	12 „
October 21st . .	12 „
December 2nd . .	12 „
December 31st .	13 „
1857.—February 6th . .	10 „
March 4th . . .	11½ „
April 1st	11½ „
May 1st	12 „
June 13th . . .	10 „
August 1st . . .	12 „
September 5th . .	11 „
September 19th .	7 „

I have chiefly been assisted in the operations by Dr. Craske Webb, of Shaftesbury-crescent, and Mr. Frampton, of Lower Belgrave-street.

Autopsy.—The body was emaciated and the abdomen much distended. On opening the cyst, which was everywhere firmly adherent, about eight quarts of a straw-coloured fluid were removed, together with a considerable quantity of pus. The abdominal cavity then appeared quite empty, no viscus being visible, but only what seemed to be an enlargement of the psoas and iliacus muscles with a dark purple covering of considerable thickness, which being opened revealed the stomach and intestines much compressed and firmly matted together by old net-like adhesions, and quite empty. The spleen and kidneys were healthy, but firmly adherent to their investing tissues. The liver, which had hitherto been obscured from view, was only seen by opening the thorax, where it had encroached upon the space usually allotted to the right lung; it was firmly adherent throughout, by its upper surface to the diaphragm, and by its under surface to the ovarian cyst. It was quite healthy, and the gall-bladder full. The uterus and appendages were one mass of cauliflower excrescence, about the size of a foetal head, and covered with thick pus; and on the left side of which was the cyst of a large abscess, whence the pus had escaped, causing the fatal symptoms. The bladder, which contained urine, was much contracted, and studded throughout its interior with the same malignant disease.

Remarks.—There was nothing in Mrs. C——'s aspect to indicate malignant disease; indeed, her early symptoms were mistaken by an eminent surgeon for those of pregnancy, a belief she was too willing to cherish. She possessed great courage and determination, and was singularly endowed with an instinctive knowledge of the kind of food best suited to her, often making a hearty meal of chops or bread and cheese and porter, very shortly after the operation, to the exclusion of soups and broths, which some kind friends imagined to be the proper diet and "quite good enough for her." From the post-mortem appearances alone, it was quite evident that Mrs. C—— was right in following the dictates of Nature, as great inconvenience must have followed the introduction of soup into so contracted a space. Her perseverance was such, that she only relinquished work a few hours before each operation, to resume it again on the fourth or fifth day.

Lower Grosvenor-place, 1858.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

AUGUST—SEPTEMBER.

MR. CHARLES HAWKINS, V.P., IN THE CHAIR.

SUPPLEMENT TO A PAPER ON THE MEMBRANA DECIDUA. BY ROBERT LEE, M.D., F.R.S.

THIS paper contained the details of the examination of the ovum found in a case of extra-uterine fœtation, reported in the *British Medical Journal* on the 13th February last. The author, on reading this report, addressed a letter to Mr. Favell, asking him to send the preparation for minute investigation, a request which was immediately complied with. The author having placed the parts in a shallow vessel, and covered them with rectified spirits, proceeded with fine forceps and needles, and a dissecting lens magnifying six diameters, to determine the nature of the connexion between the inner surface of the Fallopian tube and the outer surface of the ovum. He found the placenta and villi of the chorion completely surrounded by a deciduous membrane. He was unable completely to separate the two layers of this membrane, in consequence of its being hardened by the spirit in which it had lain sometime. The appearance of the amnion was natural. In the cervix and fundus of the uterus were several soft membranous shreds adhering slightly to the lining membrane.

ON THE INFLUENCE OF LIQUOR POTASSÆ AND OTHER FIXED CAUSTIC ALKALIES UPON THE THERAPEUTIC PROPERTIES OF HENBANE, BELLADONNA, AND STRAMONIUM. By A. B. GARROD, M.D., F.R.S.

No. II.

The object of this second communication was—

1st. To prove that the active principles of the plants under consideration are absolutely destroyed by the influence of the caustic alkalies.

2nd. To show the ratio which must exist between the different preparations of the plants and the alkalies for the neutralization to be perfect.

3rd. To ascertain the time demanded for the decomposition to be complete.

4th. To illustrate clinically the influence of the alkali in preventing the occurrence of symptoms, and removing such when large medicinal doses of these solanaceous drugs are administered.

Dr. Garrod, before proceeding to discuss these various heads, brought under notice a few points relating to the nature of liquor potassæ, and the properties of some of the officinal preparations of henbane, &c., showing that the former, although strongly caustic, still possessed but little neutralizing power, containing so small an amount of potash—not more than 6.7 per cent.; and that most of the preparations of henbane, belladonna, and stramonium, as the tinctures and extracts, were strongly acid in reaction, and hence, before the alkali could act upon the active principles contained in them, it must first neutralize this acidity, next separate the alkaloids from the acids with which they naturally are combined in the plants; that, therefore, much more was required (measured by the physiological or therapeutic strength of the drugs) to neutralize the galenical preparations than their alkaloids, or the active principles themselves. To prove that the active principles were absolutely destroyed by the alkali, he (Dr. Garrod) performed several experiments in the following manner:—A solution of atropine was made by dissolving it in water with the aid of a little spirit, dividing the solution into two parts, adding to one some carbonate of potash, to the other a sufficiency of liquor potassæ, and permitting both to remain for some hours. Chloroform was afterwards well shaken with both solutions, and allowed to subside, the supernatant fluid being poured off, and the chloroform washed with a little distilled water. Each portion was evaporated spontaneously in glass dishes. From the solution, to which carbonate of potash had been added, a gummy matter was obtained, (soon, however, becoming crystalline,) a solution of which dilated the pupil intensely; and when acidulated with hydrochloric acid, and chloride of gold dropped in, gave rise to the beautiful plumose crystals of the double chloride of gold and atropine. From the second solution, that to which liquor potassæ had been added, a strong-smelling substance was left, on the evaporation of the chloroform, having no power of dilating the pupil, and giving rise to no crystallization with the gold salt.

These experiments demonstrated beyond doubt the absolute destructive agency of the caustic alkali upon the active principles. It was also shown that most other alkaloids, as morphia, quinine, cinchonine, &c., were not so destroyed. To show the ratio which must exist between the different preparations of the plants and the fixed alkali, in order that neutralization may be perfect, Dr. Garrod gave the results of more than sixty experiments and observations in a tabular form, from which it appeared that when atropine is acted upon by liquor potassæ, the destructive influence of the latter is so great that less than twenty minims are required to neutralize one grain of the former, and that probably pure potash will destroy its own weight of atropine. That when belladonna preparations are employed, the power of the potash becomes weakened, from the causes above alluded to—namely, the natural acidity of the drugs, and the necessity of first displacing the alkaloid from the acid with which it is combined; still, however, it was shown by the table that fifteen minims of liquor potassæ will destroy a fluid drachm of the tincture, and that twenty-five minims are sufficient to produce the same change in five grains of the extract; at once demonstrating that quantities very greatly beyond the medicinal doses of these drugs—indeed, even poisonous amounts—are rendered quite inert by very moderate addition of the alkaline solution.

The same was found to hold good in the case of daturine and the preparations of stramonium. Ten minims of liquor potassæ will neutralize a drachm of tincture of henbane, although when ten grains are employed, dilatation will often ensue from a small portion of the extract, less than one grain being left free, and it should be observed that a very minute proportion of these preparations is amply sufficient to induce the effect. Of course these extracts and tinctures are liable to variation in strength, acidity, &c., circumstances which must necessarily produce an alteration in the requisite amounts of liquor potassæ required for complete neutralization. With even the best extract, however, procured from one of the first druggists in the town, it was found that nine grains were destroyed by the above-named quantity of potash. Nine grains of good extract of henbane and three fluid drachms of good tincture of the same, may be considered as doses of the drugs, which few practitioners would prescribe; yet these are destroyed by thirty minims of liquor potassæ, proving beyond all doubt that in the proportions prescribed in actual practice a total neutralization of effect ensues. To ascertain the required time, Dr. Garrod made experiments with solutions of atropine, and commenced the observations shortly after the addition of the potash. In an hour and a half the effect on the pupil was much diminished, and in two hours and a half ceased altogether. The influence of the alkali in preventing the occurrence of symptoms and removing the same when large medicinal doses of these solanaceous drugs are administered, was clinically illustrated by the narration of several cases, in which, after very decided effects had been induced by henbane or belladonna preparations, the addition of a very small quantity of liquor potassæ to the draught (the patient continuing the other drugs) quickly caused the cessation of the symptoms; and again, other instances where the withdrawal of the liquor potassæ from a combination was followed by the occurrence of powerful symptoms. From these observations and experiments, Dr. Garrod concluded that the liquor potassæ possessed the peculiar power of destroying the active principles of henbane, belladonna, and stramonium, even when in very dilute solutions, and that the combinations frequently prescribed are utterly incompatible both in a chemical and therapeutical point of view.

Dr. **Garrod**, in answer to Dr. O'**Connor**, said that he had not tried the effect of heat in his experiments, but he had no doubt that an increase of temperature would increase the rapidity of decomposition.

Dr. O'**Connor** had observed for a long time past the facts stated by Dr. Garrod, and that it had been distinctly stated by Geigar, on the authority of Liebig, that atropa, stramonium, and hyoscyamia were decomposed by fixed alkalies, and that on the application of heat the decomposition was more rapidly effected. From having read the statement of Liebig, some twelve or thirteen years ago, he had never since ordered fixed alkalies in combination with either of those preparations.

Dr. **Garrod** had enumerated in his paper the works in which the statement had been made that alkalies had the power of destroying the active principles of henbane. He claimed no originality in the matter, but simply the merit of having brought the subject prominently forward at a time when, notwithstanding the statements of several authors, medical practitioners were constantly in the habit of prescribing medicines which had the power of competely neutralizing each other.

Contributions to the Pathology of the Glandular Structures of the Stomach. By Nilson Fox, M.D., B.A. Lond.

The observations recorded contain the result of a series of microscopical examinations of 100 stomachs, taken indiscriminately from the bodies brought for post-mortem examination to the Pathological Institute of the Charitè Hospital, Berlin, under the direction of Professor Virchow. The principal morbid conditions noticed are classified under the heads of acute and chronic affections, and described under the title of "Catarrh of the Stomach." The microscopic characters of one case of acute gastritis are described; and mention is made of the appearances presented by a case of amyloid degeneration, and of one other specimen, presenting some unusual and hitherto undescribed changes, occurring apparently in the connective tissue intervening between the glands.

Accute catarrh, in addition to the naked eye appearances of injectia, swelling of the membrane, prominences caused by glands filled with epithelium, and an increased secretion of mucus, is characterized microscopally by an increased nutritive activity, displayed by the epithelial elements, which are produced with greater rapidity, and are of a larger size, than normal, while their appearance is more granular than is seen in the healthy state. The glands under these circumstances have an unusually white appearance by reflected, and a darker look than natural by transmitted, light, both of which, as well as the granular character of the individual cells, disappear on the addition of caustic alkalies. The cells break down with great facility, and frequently the gland-tubes are found filled with molecular *débris* and free nuclei. Slight fatty degeneration accompanies this condition, but does not proceed to any marked extent in the acute stages. "Granule cells" have not been observed by the author. Both classes of glands—vix., those lined with a cylindrical, and those containing a spheroidal, epithelium, appear to be equally affected, though the pyloric portion suffers with greater frequency than other parts of the stomach. The microscopic appearance observed in the case of acute gastritis recorded corresponded very closely to those above-described, but the changes in the epithelial cells existed to a more marked degree, proportionate to the intense injection which was present.

The condition of *chronic catarrh*, which appears to result from repeated or long-continued attacks of the acute affection, is characterized by a series of changes analogous to those produced by chronic inflammation of other parts. It may be met with independently of any evidences of the acute affection, or appearances characteristic of both may appear simultaneously. The naked eye appearances of chronic catarrh are, thickenings of the mucous membrane, occurring at times irregularly, and then giving rise to unevennesses of the surface, which are due to prominences of individual follicles, and of groups of glands. Alterations in colours also occur: of these the most characteristic is a slaty grey discoloration, which is met with in patches of variable extent. Translucent spots are seen scattered over the surface, and in some parts dull opaque white patches. There is an increase of the mucous secretion, which frequently has a peculiar glassy look.

The microscopic changes are numerous, but may be classified under the heads of

1. Increase in the amount of the connective tissue between glands.
2. Thickening of the membrana limitans of the glands.
3. Fatty degeneration of the glandular epithelium and atrophy, and loss of the epithelium of the tubes.
4. Pigmentary deposit in the tissue.
5. Cystic degeneration of the glands.

1. In estimating the amount of increase of the connective tissue, a fallacy has to be avoided, which arises when sections are not made directly in the line of glands, when the amount of connective tissue appears greatly increased. The amount also varies in different parts, being greater in the pylorus and the immediate neighbourhood of the cardiac openings than in other parts. Cadaveric decomposition may also, by facilitating the destruction of the membrana limitans of the glands, give rise to an appearance under the microscope of nothing but fibrous tissue, in which free nuclei and molecular débris lie imbedded. A true increase is best estimated after the addition of acetic acid, when the interspaces between the glands are seen to be widened, and the nuclei of the tissue are brought into view in increased numbers. The "état mamelonné" is occasionally produced by marked degrees of this condition, but it frequently occurs unassociated with any other morbid change, and cannot therefore be considered in pathognomic of this or any other particular affection. An appearance of an independent development of free nuclei in the midst of the connective tissue, as described by Dr. Handfield Jones, has not been seen by the author, except under circumstances where there was suspicion of their having been introduced accidentally from the rupture of the glands. Increase of the connective tissue does not appear necessarily to cause atrophy of the gland tubes, as the extensibility of the wall of the stomach obviates the consequences which the pressure produced by its retraction would cause in a less elastic organ.

2. Thickening of the membrana limitans has been observed as one of the appearances of this condition. In some, but not in all cases, the addition either of acetic or caustic alkalies may cause this membrane to swell, and then give rise to a fallacy, but it has been observed by the author without the addition of reagents.

3. Fatty degeneration of the glandular epithelium is very frequent. Slight degrees of this change can scarcely be considered as morbid, but in many cases the interior of the glands is entirely filled with fat drops.

4. Deposits of pigment may take place both in the epithelium and in the cells of the connective tissue. Its presence is due to the escape of hæmatine by rupture of the overloaded vessels during the congestion which attends the earlier stages.

5. Cystic degeneration of the glands is not unfrequently a consequence of the causes producing some of the above-mentioned conditions. The cysts may, on careful examination, be seen by the naked eye; and their origin, in changes in the glands, is proved by the fact that they contain either cylindrical or spheroidal epithelium, differing in this respect from the solitary glands of the intestine, whose contents are cells of smaller size and different characters. These are occasionally met with in the stomach; but the author believes that this frequency has been exaggerated, owing to the cystic degenerations having been mistaken for them. The immediate cause of the formation of these cysts seems to be in a contraction taking place in some part of the course of the tubes, either from an increase in the connective tissue around the gland, or from some change in the membrana limitans. The part below the contraction becomes dilated with the products of secretion, while the gland-tubes above atrophy! Sometimes two cysts may be formed on the same gland. At a later period, the epithelial contents may undergo atrophy, and the cysts remain filled with a tenacious colloid matter. These cysts have been found associated with similar formations in the rectum, and upper part of the digestion-tube, especially in the uvula, and may possibly correspond with the condition described by Professor Simpson, under the title of "Chronic Pellicular, or Eruptive Inflammation of the Intestinal Mucous Membrane." The translucent appearance observed by the naked eye in patches of the mucous membrane, is found to be caused by fatty degeneration of the epithelium of groups of glands. It is not unfrequently found around spots of hæmorrhagic erosion. To the same cause are due

whitish spots seen deep in the substance; but the difference of appearance in the two cases does not seem easily explicable. Opaque, white spots, apparently superficial, are found to be due to a fatty degeneration of all the elements of the membrane, and especially of the cells of the connective tissue. They may, by breaking down, give rise to a loss of substance at the parts, and the process of their formation and disintegration offers a striking analogy to the fatty erosion of the arterial coats as described by Professor Virchow.

There is a considerable analogy between the changes produced by these inflammatory affections in the stomach and those which are met with in the kidney, and tending to illustrate the laws of diseases of glandular organs in general; and though the differenee in the structure of the organs causes considerable variation in the forms produced, yet the essential characters are very similar in both. In the acute stage they are chiefly evidences of increased nutritive activity, called forth by the inflammatory stimulus, as shown by the enlargement of the epithelium, and the increase of protein contents in the interior of the cells. In the more chronic forms, the connective tissues are those principally affected by a tendency to hypertrophy; while the gland-cells undergo a fatty degeneration or atrophy; and the parallel is complete, even to the formation of cysts caused by similar changes in the gland tubes of both organs.

The causes of catarrhal conditions of the stomach are, as pointed out by other observers, to be found with greatest frequency in diseases obstructing the general circulation, and changes belonging to the chronic type are found with a paramount frequency in phthisical patients; though no case of tubercle of the stomach has been observed by the author. Acute catarrhal affections appear to be not unfrequently associated with septic or other acute general diseases, and have been observed in cases of puerperal fevers and cholera, where the kidneys presented, both to the naked eye and under the microscope, the appearances observed in the first stage of Bright's disease. Chronic induration of the kidney, associated with fatty degeneration of the renal epithelium, and increase of the connective tissue, has also been observed coincidently with similar affections of the stomach.

ON PENETRATING WOUNDS OF THE CHEST. By PATRICK FRASER, M.D., Physician to the London Hospital.

The author considers that certain observations made, and since extended, by him, while attached to the general hospital in camp before Sebastopol, during the height of the siege in 1855, may be acceptable to the fellows of the Society. There are no records of the effects produced by, or the treatment adopted for, wounds of the lungs, in the ancient wars. The employment of gunpowder in warfare in 1346, in which year large guns were used at the battle of Cressy, and subsequently in 1382, when small arms were employed by the Venetians, effected a complete change in the mode of action between contending armies, and a characteristic variety in the wounds inflicted.

In collating the statistics of lung wounds, the author has been surprised at the small number which were brought into hospital in the Crimea, and also at the few cases given in the records of various previous wars, and, in pursuing the inquiry, at the rarity of cases reported in the various medical periodicals and journals; and the remarkable scarcity of morbid preparations of lung wound in the professional museums of London, of Chatham, and elsewhere, warrant a conclusion that our sphere of observation on this very important subject has hitherto been very limited. The author explains this by alleging that a large, if not the largest, portion of mortal wounds proceeds from injury to the lung. The men are struck down, and die rapidly and unnoticed. Out of the grand total of wounded throughout the Crimean war—viz., 12,094, there are returned under the head of "penetrating wounds of the chest," only 125, being little over 1 per cent.

The points requiring most attention in relation to chest wounds are: the mortality, the diagnosis, the prognosis, and the treatment.

First, as to the mortality. The author is strongly inclined to the opinion that lung wounds are very fatal, and says that great doubt exists in his mind whether many of the cases reported as "wounds of the lung" were not wounds of the pleura only, and sometimes not even of that membrane; and he believes that many of the alleged wonderful recoveries from wounds of the lung would have been disproved at death if a post-mortem examination had been always performed. On the other hand, when the pleuræ only are wounded, recovery frequently takes place. Various experiments by the author, and Dr. Richardson and others, fully establish these points. He records his warm thanks to Dr. Richardson for his able assistance in the conduct of the experiments narrated in the paper, in which he has freely incorporated many valuable opinions, suggestions, and deductions expressed by that gentleman.

The diagnosis and prognosis are next noticed; and the author enters fully into the general symptoms attending "wounds of the chest," drawing attention to the fact, that there is often little or no anxiety, dyspnœa, or other marked symptom attendant on such wounds. The contrast, in this respect, between "wounds of the abdomen" and "wounds of the chest," is remarkable; in the former there is present, invariably, great nervous agitation and sinking. In pursuing the diagnosis, the prime question is whether the substance of the lung be wounded or not; for in this the prognosis is seriously concerned. An answer is not easily given. Some physiologists hold that the lung collapses, whether its substance be wounded or not, whenever the pleural cavity is opened. The author himself, Dr. Richardson, and many writers, have observed the lung of the wounded side to expand on expiration, and to contract upon inspiration: as this curious phenomena was seen sometimes when the lung was wounded, and sometimes when the lung was not wounded, the author concluded that no reliable practical deduction can be drawn from that very curious physiological fact.

The author next enlarges upon those symptoms which are usually accepted as, and by numerous writers positively affirmed to be, conclusive proof of the substance of the lung being wounded. Various cases are cited to show the necessity for caution in pronouncing a diagnosis on the apparent track of the ball.

He shows, by several tables, the comparative frequency of *dyspnœa*, *hæmoptysis*, *emphysema*, *pneumonia*, and *the passage of air through the wound*, in the cases which he witnessed.

Out of 9 fatal cases in which the lungs were wounded, only 3 had *dyspnœa*. Out of 9 fatal cases, in which the lungs were not wounded, 3 had dyspnœa. Out of 12 cases of recovery, 2 had dyspnœa. The author considers that dyspnœa is a consequence of the inability, during inspiration, of a lung to follow up the expanding chest wall. It will be most intense, therefore, when the action of the thorax is free, and when, from an obstruction in the bronchial passages, the air cannot reach the vesicles, and the lung remains more or less expanded. But, when there is an opening in the chest-wall, and air can pass freely out and in by this abnormal channel, the lung having collapsed, there will be no effort to retain its normal position, and, consequently, there will be no dyspnœa. If this be the true explanation, we must, then, receive dyspnœa with great caution as a proof of lung wound.

The author views *hæmoptysis* as a most deceptive sign of lung wound, notwithstanding that almost every writer on the subject has regarded its presence as a conclusive sign of lung wound. In 9 fatal cases, in which the lungs were wounded, only one had hæmoptysis. In 9 fatal cases, in which the lungs were not wounded, 4 had hæmoptysis. In 12 cases of recovery, 3 had hæmoptysis. Indeed, in those cases where the lung has been wounded, as verified by examination after death, the appearance of the portion of lung around the track of the wound would lead to the conclusion that the highly-condensed portion of lung had acted protectively against hæmorrhage. When it does occur to such an extent as to threaten suffocation, it becomes pretty certain that the trachea and some large vessel have been opened. That hæmorrhage, taken alone, is no proof of lung wound is shown by its happening in cases of mere concussion or contusion.

Emphysema, contrary to the opinion of most writers, is a very rare consequence of lung wound. Out of 9 fatal cases, in which the lungs were wounded, it occurred in 3 instances. Out of 9 fatal cases, in which the lungs were not wounded, it occurred in one instance. It was present in one case out of 12 recoveries.

Pneumonia may supervene, but not of necessity, as some writers assert, to lung wound; but, when it does approach, it is only after a lapse of some time, and cannot therefore be made available as an early means of diagnosis. Out of 9 fatal cases, in which the lung was wounded, it did not appear once. Out of 9 fatal cases, in which the lungs were not wounded, it appeared in one case, and that on the third day. Out of 12 cases of recovery it appeared in two cases, on the fourth and twentieth day respectively. The post-mortem examinations revealed, in several instances, appearances which many persons would have put down to the effects of pneumonia, but which the author considers to have been merely an intense congestion. In some of the experiments a degree of congestion followed, within a few minutes, the infliction of the injury, which might easily have been mistaken for pneumonia, in a hasty pathological examination. The author considers that when an opening exists in the chest wall, the physical signs indicating the presence of pneumonia are so modified that no reliance can be placed upon them. He dissents from the opinion expressed by come authors, that traumatic and idiopathic pneumonia are homogeneous states, and gives his reasons for this difference of opinion.

The passage of air through the wound, often with a loud gurgling sound, and appearing to take the place entirely of the tracheal passage, has a most startling effect upon the bystanders, and is generally put down as a certain sign of lung wound. Out of 9 fatal cases, in which the lung was wounded, it was present in 2; out of 9 fatal cases, in which the lung was not wounded, it was present in 4 cases; out of 12 cases of recovery, it was present in 1; it was present in three experiments in which the lungs were not wounded. The author is rather inclined to the opinion, that when the lung is really wounded this "passage of air" will in most cases cease. Dr. Fraser concludes, that although there are none which can be regarded as special indications of lung wound, yet, if there were three or more of the ordinary signs present, they may be taken as strong presumptive proofs of its existence; and if there be present, besides, more or less anxiety, coldness of surface, and orthopnœa, it may be considered nearly certain that the substance of the lung is wounded, and that the patient is in imminent danger.

The author enters fully into the treatment of "penetrating wounds of the chest," and inculcates the non-necessity for an over active manual interference to remove the lodged missile, by showing that a ball may remain innocuous for years in the thoracic cavity; and he gives, as one example, a case were the ball was fifty years in the body; and mentions an instance of a gallant officer, who, after having been subjected for some time to the well-meant but injudicious pokings of his surgeon, inquired what he was about, and on receiving the answer, "searching for the ball," his reply was gruff and graphic, "I wish you had told me that before, because you will find it in my waistcoat pocket."

The author next adverted to what has been, and is still asserted by many to be, the "sheet anchor" in the treatment of "penetrating wounds of the chest"—viz., venesection. He gives the opinions of others, and expresses his own doubts, as to the prophylactic power of venesection in obviating the tendency to inflammatory action, or in arresting its progress, or in removing its effects when present. In reference to treatment, he recommends the removal of foreign substances, and all other causes of irritation, when practicable, from the wound. When the wound is small, and especially if there should be two openings, the closing of the anterior is to be attempted; and if there be no sign of effusion, both may be closed; and, in all cases, absolute rest, cooling beverages, and moderate nourishment are called for, avoiding over-stimulation. Bleeding, mercurialization, narcotism, and antimony, the old elements of treatment, may, under the direction of sound skill, and under special circumstances, become advisable; but their routine application is second only in mischief to the injury itself.

The following summary closes the paper:—

1. When a weapon or bullet enters a pleural cavity, the external air passes inwards.

2. If the wound be small, there seems to be little, if any, alteration in the movements of the lungs; as the respiratory murmur may be heard, more or less distinctly, on auscultation.

3. It follows from No. 2, and has been otherwise proved, that when a wound is formed in a pleural cavity, of a size equal to, if not larger than, the opening at the glottis, collapse of lung is not a necessary consequence. That, under such circumstances, the lung of the injured side may inflate, and that such inflation occurs during expiration, and not, as might have been anticipated, during inspiration.

4. That the thorax may be pierced by a cutting instrument or a bullet, obliquely or transversely, without wounding the lung—ergo, two apertures is no proof that the lung has been wounded.

5. That mechanical congestion of the lung is often mistaken for the effects of inflammatory action.

6. That simple opening of the pleural cavity in animals seems to be productive of little or no risk, and only very trifling inconvenience.

7. That in the human subject, as well as in animals, an actual wound of the substance of the lung is always, sooner or later, mortal; but not from the effects of inflammatory action, but from the cessation of proper æration, in either a whole or portions of one or two lungs.

ON THE INFLUENCE OF THE CERVICAL PORTIONS OF THE SYMPATHETIC NERVE AND SPINAL CORD UPON THE EYE AND ITS APPENDAGES, ILLUSTRATED BY CLINICAL CASES, WITH OBSERVATIONS. By JOHN W. OGLE, M.D., Assistant Physician to St. George's Hospital.

The main object of this paper was the application to clinical medicine of the various experiments which have from time to time been performed, as showing the influence possessed by the sympathetic in the neck and the upper part of the spinal cord upon the iris and upper eyelid. Experiments and dissections as regards the lower animals have shown that the curtain of the iris, containing, as it does, two sets of muscular fibres, a circular set by which the pupil is contracted, and a radiating set by which it is enlarged, is under the domination of two separate and distinct sources of innovation. The third cranial nerve is found to control the circular or contracting fibres, and the sympathetic, by virtue of communications with the lenticular ganglion, is found to control the dilator or radiating fibres. Hence if the influence of the third pair be destroyed, the pupil becomes dilated, inasmuch as the dilator fibres, those presided over by the sympathetic, are unopposed; again, if the influence of the third cranial pair be left unimpaired, and that of the sympathetic be destroyed by section or extreme pressure, then the pupil becomes contracted. The author dwelt upon the history of the various experiments upon which the above statements are made, and also upon those from which it is concluded that in certain parts of the spinal cord resides the power or influence which acts upon the dilator fibres of the iris passing to that structure through the sympathetic viâ the roots of certain cervical and dorsal nerves. From these latter it is apparent that the same paralysis of the dilator fibres of the iris which follows section of the sympathetic in the neck follows also the severance of such fibres as connect the sympathetic with the spinal cord, as also the section or destruction of the spinal cord itself in certain parts. Accordingly it might naturally be expected that any cause of extreme pressure acting upon the various portions of the nervous system before alluded to would, as in the various experiments before adduced, cause a contracted state of the pupil on the side corresponding to that on which the extreme pressure existed. And thus it was that Dr. Gairdner, of Edinburgh, first sought to explain those cases in which, along with an intra-thoracic aneurism, a contracted state of the pupil coincided. These cases of his were detailed, several of them not having been hitherto recorded, and to these others were added of his own observation, as well as some from other sources. Cases were next given in which pressure from aneurism upon the sympathetic in the neck had produced contraction of the pupil. In the third place, instances were adduced in which extreme pressure from other causes than aneurisms had produced a like effect upon the pupil, as in the case of enlarged glands, carcinomatous deposit, &c. In the fourth place, bearing in view the intimate connexion between the sympathetic main branches in the neck and the cervical part of the spinal cord, he drew attention to several cases in which a contracted pupil had been observed in injuries of the spinal cord itself.

But in addition to a contraction of the pupil as brought about by section of the sympathetic, spinal cord, &c., as before spoken of, experimenters have also found that irritation or galvanism of the same parts of the nervous system will bring about a dilatation of the pupil, and that this dilatation may be effected even when section or extreme pressure has already given origin to contraction of the pupil. Accordingly, in these physiological facts an explanation was sought of certain cases in which pressure from aneurism, diseased products, &c., appeared to produce, not a contraction, but a dilatation of the pupil in man; and he instanced, in the 5th place, several cases in which the pressure from various sources was inestimably so much in the extreme as to be, in fact, a source of irritation or stimulus, acting in the same way as it was found in animals, that any stimulus, mechanical, chemical, or galvanic, would act upon the sympathetic. In no other way could he explain the dilated state of the pupil which existed.

But besides the above-described effect upon the pupil of the eyes, in enumerating the various experiments in which the sympathetic, &c., was divided, special attention was drawn to a dropping of the upper eye-lid, or ptosis, which on several occasions was observed. This phenomenon was explained on the supposition that along with the sympathetic fibres to the iris, those to the third cranial pair are also paralysed, and hence the levator of the upper eyelid, which is supplied from the third pair, is deprived of power to a greater or less degree. One or two cases were also adduced in which ptosis of the upper eyelid was observed in connexion with pressure about the neck, from aneurism of other sources. He offered the same explanation of the convergent strabismus which, in the hands of certain experimenters, was, along with other results, found to depend upon a division of the sympathetic cord in the neck. He supposes it to have existed by reason of paralysis of such fibres (in several animals, five or six in number) as pass up to join the sixth cranial pair of nerves, by which the power of this muscle becomes weakened, and its action counterbalanced by the internal abductor muscle.

ON A CASE OF DEAF-DUMBNESS OF MORE THAN TWENTY YEARS' DURATION, IN WHICH THE HEARING AND THE ARTICULATION WERE GREATLY BENEFITED. By JOSEPH TOYNBEE, Esq., F.R.S., F.R.C.S., Aural Surgeon to St. Mary's Hospital.

In the year 1856, the author laid before the Society the results of some inquiries respecting the deaf and dumb, conducted at the asylum in the Old Kent-road. One of those results was the establishment of the fact that a large number of persons admitted as deaf and dumb nevertheless possess more or less of the power of hearing. Thus, amongst 411 children examined, no less than 166 heard certain sounds. Observation of his fact impressed the author with the desirableness of attempting to cultivate the hearing power in such patients, and the case related was one amongst the most successful.

AN ACCOUNT OF A CASE OF CALCULUS IN THE BLADDER REMOVED BY LITHOTRITY, IN WHICH A COMMUNICATION EXISTED BETWEEN THE BLADDER AND INTESTINE. By CHARLES HAWKINS, Esq., F.R.C.S., Consulting-Surgeon to Queen Charlotte's Hospital.

In February, 1855, the patient, a gentleman aged fifty-five, first observed that he passed a substance, about two inches in length, with his urine. He continued to do the like during the whole of that year, but was quite free from it throughout 1856, in the beginning of which year the symptoms of stone set in. He consulted the author on July 14th, 1857, when stone in the bladder was readily detected. Notwithstanding the history of the case, it was determined to have recourse to lithotrity, and the operation, after some few impediments and delays, was completely successful.

REPORT OF A CASE OF DISLOCATION OF THE SHOULDER UPWARDS AND INWARDS, ACCOMPANIED BY A DISSECTION OF THE PARTS INVOLVED IN THE INJURY. By T. HOLMES, M.A., Cantab., F.R.C.S.

The patient was admitted into St. George's Hospital, under Mr. Tatum. The accident proved fatal in consequence of other very severe injuries. On examination, the head of the humerus was found immediately under the skin, having passed through the fibres of the deltoid muscle, and having the cephalic vein on its inner side. It had fractured the coracoid process in its passage upwards, and was resting behind on the stump of this process and on the clavicle, with a small portion of the coraco-acromial ligament, which remained untorn. *Internal* to it (beside the fibres of the deltoid and the cephalic vein) was found the fractured extremity of the coracoid process, with the muscles attached to it. *External*, and somewhat posterior to it, was the acromion process, separated from it by some of the fibres of the deltoid. *Below*, and a little external to it, was the glenoid cavity, the tip of which lay on a horizontal plain quite below the level of the dislocated head of the bone. The long tendon of the biceps remained still attached to the scapula, and was therefore situated below and external to the head of the humerus. The bone, in passing out of the glenoid cavity, had injured this tendon slightly, so that some of its internal fibres had been broken away from the muscle. The subscapularis muscle was intact. The muscles attached to the greater tuberosity of the humerus were torn through, except that a portion of the teres minor remained. The capsular ligament had been lacerated at its upper and inner part, forming a large hole for the passage of the head of the humerus. The author referred to cases somewhat resembling this, related by M. Malgaigne, in his large work, and by Mr. Soden, in the "Transactions" of this Society; and concluded with some remarks upon the diagnosis and mode of treatment of this accident.

PATHOLOGICAL SOCIETY OF LONDON.

DR. WATSON, PRESIDENT.

DR. **BRINTON** exhibited a

DISEASED SUPRA-RENAL CAPSULE, WITHOUT BRONZING OF THE SKIN,

taken from a man, aged fifty, who had been under his care in the Royal Free Hospital. He had extreme whiteness of the skin, and dropsy, but no albumen in the urine. Afterwards some casts were found in the urine. He sank rather suddenly from an attack of pyæmia, and the kidneys were fond in an early stage of Bright's disease.

Mr. **HUTCHINSON** showed

DISEASED SUPRA-RENAL CAPSULES, WITH BRONZING OF THE SKIN.

The patient was a boy eleven years of age, who was seen by Dr. Bennet one week before death, who looked upon it as a case of bronze skin. He was in bed but a few days only before he died. Both supra-renal bodies were extensively diseased, and so were the mesenteric glands, but nothing else.

Dr. **HARLEY** saw the body some days after death, and believed it was a case of true bronze skin.

Mr. **HUTCHINSON** also exhibited a

MEMBRANE EXPECTORATED FROM THE TRACHEA,

being a cast of the bifurcation, from a boy aged three years, attacked with modified croup, proving fatal on the third day. There were sore throat and exudation around the tonsils and pharynx. The cast was tubular and forked.

Mr. **HUTCHINSON** also showed an

OVARIAN CYST, REMOVED DURING LIFE,

only the day before, from a young lady, aged twenty-one, who had had it for eighteen months. She was seen in consultation with Mr. Baker Brown, and his reasons for removing it were, that it was a multilocular cyst, her health was beginning to fail, and her extreme desire to get rid of it. There were no adhesions, and this was diagnosed during life by the mobility of the tumour, which was so large as to give her the appearance of a full time pregnancy. She was tapped once, some months before.

Dr. **WILKS** showed specimens illustrating

SYPHILITIC DISEASE OF THE LIVER.

He stated the difficulty which existed in the attempt to prove positively the connexion between syphilis and organic changes in the internal organs of the body, and he also alluded to the different opinions on the subject. He himself had no doubt of the effects resulting from syphilis, and that in the cases of fatal cachexia following it various visceral changes would be found. He had no doubt of syphilitic pulmonary affections, nor of disease of the bloodvessels, exhibited more especially in those cases of paralysis associated with the tertiary forms of the complaint, and due to a softening of the cerebral structures. With respect to the liver, the disease was manifested by the production of fibroid nodules, as seen in the plate of the last volume of the Society's "Transactions." The three specimens now exhibited showed similar fibroid deposits scattered throughout the organ, and in one case these were associated with waxy or lardaceous disease—a condition very frequently found in those who have died of syphilitic disease of the bones. The first case was that of a man who had been invalided for six years, owing to syphilitic ailments, as nodes on bones, rheumatism, cutaneous eruption, &c. He died with a waxy spleen and liver, and throughout the latter there were nodules of fibroid deposit. He had been intemperate, and the only doubt was, how far the fibroid condition was allied to ordinary cirrhosis, and due to alcohol; but inasmuch as the waxy change was certainly an important part of the general dyscrasia, there was an equal probability in favour of the other condition being also a part of it. In the second case, there were necrosis of the clavicle, scars on the body denoting the old ecthymatose eruption, a waxy condition of kidney and spleen, and the liver was found to contain throughout its substance a large number of fibrous deposit. No history of syphilis had been inquired for, but the organic changes throughout the body were due to some general or constitutional derangement having a doubtful origin, and that this was syphilitic is most probable, especially if the extremely low character of the patient be taken into consideration. In the third case, that of a woman who died of a chronic laryngeal affection, no history of syphilis had been obtained, but the independent opinion of two surgeons who saw the larynx was unhesitatingly given in favour of its being syphilitic. It consisted of a fibrous thickening, amounting to a hard mass, of the glottis so as to completely close it. On the liver there were two deep cicatrices, and on cutting through these, hard, tough fibroid nodules were found beneath. Dr. Wilks, in conclusion, stated that the probabilities were all in favour of this condition resulting from syphilis; and associating these cases with several others he had seen, he had little doubt that these changes in the liver were due to the cause named, although further investigation was required to substantiate it by absolute proof.

Dr. **WILKES** exhibited specimens of

FIBROID DEPOSITS IN THE LIVER, LUNGS, AND LARYNX,

which he believed to be syphilitic. The history of the case was unfortunately imperfect, the man being a sailor, and dying almost immediately after his admission into Guy's Hospital, from chronic disease of the larynx, the only external signs of syphilis being scars on the penis and in the groin. The larynx and trachea were found to be most extensively ulcerated, and the sub-mucous tissue much indurated by new fibrous deposit, as seen in specific ulcers. The liver contained large round masses of fibroid deposit, yellowish white, and of leathery consistence, and the lung contained similar deposits. These were very remarkable, and were altogether unlike the deposits of pneumonia or scrofula, but consisted of small yellow tough masses, exactly resembling those in the liver. This condition of lung was especially interesting, because, although pulmonary disease, or phthisis, is recognised as occurring in syphilitic subjects, the lungs are generally too disorganized to enable us to discover in them any peculiar characteristics, but in the present instance, the early stage of the disease displayed a deposit resembling that found in other parts of syphilitic subjects, thus manifestly proving that the pulmonary affection in syphilis is one *sui generis*.

Mr. CHRISTOPHER HEATH showed a

TUMOUR OF THE HUMERUS REMOVED BY AMPUTATION AT THE SHOULDER-JOINT.

This was removed by Mr. Holthouse at the Westminster Hospital, in February, with a solid tumor under the deltoid muscle; gangrene set in a few days after, with pleurisy and death. The tumour was found to be recurring fibroid.

Dr. SEPTIMUS GIBBON exhibited a

CANCER OF THE OMENTUM,

which had spread to the intestine, and for which Amussat's operation was performed by Mr. Borlase Childs in the groin. She sank five hours after the operation. The cancer was of the scirrhous form, involving the coats of the ascending colon, and forming an annular ulcer, constricting the gut. It appears to have come on suddenly.

Dr. PEACOCK presented specimens of

PLASTIC SPUTUM.

They were expectorated by a man, twenty-seven years of age, an out-patient, under Dr. Peacock's care, at St. Thomas's Hospital. He has been ill for two years; he was first attacked by epistaxis, and this has repeatedly recurred. About six months ago he took cold, and had a cough, with slight expectoration, and three months ago he began to expectorate the fibrinous casts. He states that he feels them in his throat; after a slight cough he expels them with force, either by the mouth or nostrils. When expectorated, they are sometimes accompanied by a slight escape of mucus, but more frequently they pass alone. He has never had hæmoptysis, and with one exception the membranes have been white and free from any tinge of blood. When first expectorated they are rolled up into masses, about the size of a bean, but subsequently they unfold, and display the usual branched form, the larger branches being distinctly hollow. The patient is a lighterman, living in Bermondsey; he has a sallow, malarious aspect, and there are evidences of consolidation at the apex of the left lung. The urine is not albuminous. He continues to have occasional epistaxis. The casts were expectorated at intervals.

Dr. PEACOCK also exhibited a specimen of

OBSTRUCTIVE DISEASE OF THE AORTIC ORIFICE PARTLY DEPENDENT ON A BAND OF FALLEN MEMBRANE,

which was removed from a man, fifty-seven years of age, admitted into St. Thomas's Hospital under Dr. Pocock's care, in October, 1857. He had suffered from several attacks of rheumatic fever, and had been labouring under cardiac symptoms for about a year. While in the hospital he presented the usual signs of obstructive disease of the aortic orifice, and a loud systolic murmur was audible most distinctly at the base of the heart, and at the upper part of the sternum. No distolic sound or murmur was detected. The urine was albuminous, and the lower extremities were œdematous. Purpurous eruptions appeared repeatedly on the lower extremities, and remained out for a day or two; they then disappeared, and again recurred after about the same time. He died on the 23rd of December. On post-mortem examination the heart was found of large size, weighing nineteen ounces and a half. There was great hypertrophy and dilatation, especially of the left ventricle. The aortic valves were extensively diseased; small aneurisms were situated at the origin of the aorta, and a white elastic, nodulated membrane extended nearly round the aortic orifice, beneath the attachments of the valves. It formed a firm ring, which was defective only on the mitral valve, and the aperture by which the ventricle communicated with the aorta was so contracted as only to admit of the passage of the forefinger.

Mr. HUTCHINSON exhibited a number of plaster casts of the mouths of children, to illustrate

HEREDITARY SYPHILIS, AND ITS EFFECTS ON THE DEVELOPMENT OF THE TEETH.

These casts and drawings were taken from cases of undoubted hereditary syphilis. A protracted inflammation of the mouth was, he said, a very common symptom in this disease, extending to suppuration and exfoliation of the crowns of the teeth. A committee of four gentlemen was appointed to examine into Mr. Hutchinson's cases.

HARVEIAN SOCIETY.

DR. HAMILTON ROE, PRESIDENT.

DR. B. SANDERSON introduced the subject of

DIPHTHERITE

for discussion. There was much difference of opinion in the profession as to the identity of diphthérite. He would first relate the symptoms of the disease described by M. Bretonneau, of Tours; then refer to the character of the disease with has recently been prevalent in this country; and, finally, compare and contrast them. Diphthérite was prevalent in America (where it proved fatal to Washington) and other countries before it was described by Bretonneau. It was not dependent on local causes or over-crowding. It was capable of transmission by personal contact, but not through the air. It resembled much our croup, differing in this respect, that the first appearance of the exudation was on the tonsils. The character of the exudation was very tenacious, and covered the whole of the pharynx, and not parts. The constitution was but little affected; and if the local disease could be relieved, that was all that was necessary. The disease recently prevalent in this country Dr. Sanderson believed was identical with the malignant sore throat described by many authors, and that in a great number of instances scarlatina precedes it. There was fœtid breath, much fever, amounting sometimes to a typhoid character. The thickness and adhesiveness of the exudation was less marked than that described as occurring at Tours, and the mode of death was different. In this country exhaustion and fever destroyed the patient, rather than the asphyxia, which suddenly put an end to Bretonneau's patients. In true diphtheria there was no fever and no fœtid breath; both these were remarked in this country. In true diphtheria the local affection was all-important, and rather of a chronic nature, and the exudation was firm, elastic, and extremely tenacious. In this country the general symptoms were of more importance than the local, and the exudation was less firm and more easily broken up. Death occurs from asphyxia in the true disease, and from the constitutional affection in the recent prevalent attack. The treatment likewise indicated the wide difference between the two diseases. Here a tonic plan had been undoubtedly called for, whilst the true diphthérite was treated by antiphlogistics. The speaker concluded by asking, "Is there such a disease in England as M. Bretonneau describes?" and, "In the experience of members, was a strong or a weak solution of caustic the most useful as a topical application?"

Mr. **Stewart** related some cases bearing upon the subject, and said that in one case there was considerable œdema of the neck, with enlargement of the sub-maxillary glands. In one case only had he seen the granular deposition, and the exudation in all the other cases was thick mucus.

Mr. **Cleveland** had seen lately many cases of severe sore-throat, but in none was there a false membrane, and, therefore he considered that the true diphtheria was a very rare disease in this country.

Dr. **Hutchinson Powell** agreed with Dr. Sanderson that the disease lately prevailing was a distinct disease from that described by Bretonneau. Dr. Powell, in his practice, had seen much sore-throat of a low character, with œdema, glottidis, and swelled glands. The best treatment he found was dilute nitric acid, locally, and tonic treatment, internally. He differed from Dr. Sanderson in the opinion that local circumstances had no influence in producing the disease.

Mr. **Lobb** had suffered himself from fever, delirium, and sore-throat after attending a child with scarlet fever. The throat was swollen to such an extent that he could not swallow for several days; a mucous exudation ensued, and then hæmaturia, and he got well. He had seen many cases since, and had used the solid nitrate of silver with advantage.

Dr. **Weber** had seen these cases in London, and had not remarked the swelling of the throat, or the fœtid breath. He had applied a strong solution of nitrate of silver, and had obtained fungoid casts thrown off from the throat. A child, under Dr. Barlow's care, in Guy's Hospital, had swelling of the throat for three weeks, with symptoms of croup. He died, and the false membrane extended from the larynx into the pharynx. Five other children, in the same family, were attacked, and all had caustic applied. A country gentleman had his throat covered with grey patches; there was no swelling. He died from exhaustion.

Dr. **Camps** considered that there were different affections of the throat described under one name, but that there were nevertheless real cases of diphthérite in this country. At a place in the country an epidemic of what was called croup, but which the medical attendant said differed somewhat from the usual character of that disease, occurred. The rare circumstance of an epidemic of croup led him (Dr. Camps) to the opinion that this outbreak was, in fact, the disease under discussion. He believed that cases began as diphthérite and ran afterwards into croup, and that some are complicated, and thus mystify the diagnosis. The prevalence of stomatitis of late indicated to his mind a diphtheritic tendency. He eulogized the treatment by solid nitrate of silver applied locally, and strong supporting food and medicines. In some cases, emetics and calomel might be used advantageously.

Mr. **Eardley** had seen a case of diphthérite in which the pharynx was covered with grey deposit. Antiphlogistic treatment with solution of nitrate of silver had no influence over the disease. Subsequently, strong hydrochloric acid was applied, which removed some of the fibrinous deposit. Port wine and beef tea were freely administered, and poultices applied externally. This treatment relieved all the symptoms, and much of the exudation was spat out, looking like semi-liquid glue. This child perfectly recovered. A young man of twenty had a white granular deposit on the tonsils, which was likewise removed by hydrochloric acid causing the expulsion of a fibrinous cast.

Dr. **Pollock** believed that Bretonneau had described his disease in a manner which would not compare with the reality. True diphthérite, so described, was not a prevalent disease, but many more or less approximated it. Definitions in medicine confined our notions and cramped our practice. All these cases arose from a poisonous influence, and however different were yet identical. He had remarked in the same family how these throat affections approximated and diverged from the diphtheritic type; in some there was exudation, in others ulceration and excavation. He found strong caustics the most beneficial application, and the internal use of calomel generally desirable.

Dr. **Sanderson**, in reply, said that diphthérite and croup were one and the same disease; and that, in his opinion, the pultaceous pharyngitis of the French was the disease lately prevalent in this country.

REPORT OF A CASE IN WHICH THE OPERATION OF PARACENTESIS THORACIS WAS PERFORMED FOR THE RELIEF OF OBSTINATE VOMITING.

The particulars of the case, communicated to the Society, through the President, by Mr. **Heslop**, of Birmingham, were as follows:—The patient was a girl aged twenty, who had been for two months affected with effusions into the left pleural cavity. Extreme emaciation, night sweats, &c., were present, but, in addition to these, no food of any kind was retained by the stomach. No relief following ordinary measures, and it being evident that the patient was dying of inanition, Mr. Heslop advised the performance of the operation. Two pints of fluid were drawn off, and the relief which followed was immediate and complete. The patient rapidly recovered. Mr. Heslop added that, in advising the performance of the operation, he took the same general line of argument as that pursued by the accoucheur in inducing artificially premature labour, when the interference with important functions, as that of low stomach, calls for that proceeding.

The **President** then related the particulars of a case of

CIRCUMSCRIBED EMPYEMA,

occupying the left mammary region of a child, aged nine. The diagnosis having been fully established, a canula and trocar were introduced, and ten ounces of a puriform fluid drawn off.

Mr. **Weeden Cooke** read a paper on

SCROFULOUS DISEASE OF THE TESTICLE.

the principle object of which was, to show the advantage of constitutional treatment, by means of which castration might be avoided. He described the causes and nature of this disease, and, for the purposes of diagnosis, contrasted it with the other lesions of this gland—viz., scirrhus, cephaloma, cystic disease, syphilitic, arcoma, and common hypertrophy; and related several cases in which there had been tubercular enlargement with abscesses, and in some a protruding fungoid growth. In all these cases he had found a combination of iron in full doses, with iodide of potassium, to improve the vital powers; and that, with the aid of a sulphate of copper lotion, or the salt itself, applied to the ulcers, a perfect cure was obtained; whereas it frequently happened that after the removal of a tuberculous testis by the knife, the disease would reappear in the remaining one.

MEDICAL SOCIETY OF LONDON.

Dr. Willshire, President.

Dr. **Ogier Ward** narrated the particulars of two cases. The first was that of an old lady, aged eighty-three, who had long suffered from dyspnœa, attended with anasarca, from dilatation of the heart without any lung disease, in whose right brachial artery all pulsation was absent below the middle of the biceps, where the vessel was hard and painful for about an inch, followed in a few days by complete absence of pulse in all the arteries of that side; the pulse at the left wrist being irregular and intermittent, but not at the heart, as there a feeble double sound was audible during the intermission. On dissection, the aorta was dilated at the arch, contracted below, and atheromatous generally, and a calcareous shell contracted the orifices of both the innominata, and the common carotid coronaries were ossified. The points here are, extensive and fatal dyspnœa, without any lung disease, not even congestion; no apparent difference in the two hands and arms, but complete loss of pulsation, though the arteries were only contracted in their calibre.

The other case was that of a gentleman, aged fifty-three, suffering also from extensive dyspnœa, amounting almost to angina, with dilatation of the heart and similar pulse to the last case, yet also with no lung disease, albuminuria, and anasarca, who had pain in the right side of the neck, followed in two days by a small, hard, apparently glandular swelling above the clavicle, attended with œdema of the arm and weakness of the pulse in the wrist. The pain subsided in a few days, but the tumour remained, and after death, twelve days from the attack of pain, the subclavian vein and its branches was found blocked up by fibrinous coagula, firmly adherent to the lining membrane, and close to it an inflamed gland. Here the point is the sudden local phlebitis, preceding the formation of the coagulum and swelling of the gland, as well as some of the points of the former case.

The author believed the dyspnœa in these cases arose from the heart being too weak to send a proper supply of blood through the lungs. The double sound audible at the heart, but not perceptible at the wrist, is hardly to be accounted for by any theory of the heart's sounds hitherto propounded, and its exciting cause is still more obscure.

Mr. **Barwell** read a paper

ON TUMOURS OCCURRING IN THE NEIGHBOURHOOD OF JOINTS.

The author pointed out that a large number of widely different sero-synovial cysts were confounded together under the name of ganglion, so much so that systematic authors describe such disease in widely different manners, and in their accounts disagreed so greatly that it was impossible to reconcile them; and he proposed to show, from the histories of their formation and their constitution, what are the chief varieties of such tumours. It appeared from his (the author's) dissections that there might be found in certain joints of persons who had led a laborious life, little projections from the synovial membranes, which had been considered in France as normal structures, and called synoviparous crypts. Mr. Barwell considered them abnormal, the result of over-exertion, whereby a portion of the membrane yielding to a pressure from within, protruded beyond its surface into the subsynovial tissue, or into a mesh of the ligament itself. When once arrived in that place, the little projection or hernia from the membrane might increase and pass through the fibrous structure, be it ligament or tendinous sheath, so as to form a more or less globular swelling superficial thereto. The author had found these in all their different conditions: the simple hernia from a synovial membrane communicating by a tube, more or less large, with the interior of the sac; such tumour also when the tube had closed, and left simply an imperforate cord whereby the point of origin might be determined; and the perfectly independent cyst, where it had broken away entirely from the original membrane. This was the only mode of origin for true ganglion; mere enlargements of bursæ were not to be considered as coming under the same category. Another form of disease which, from the symptoms enumerated, had been described as ganglion, was dropsy of synovial sheaths. In this malady, not only a portion, but the whole of the sac was involved; and in this lay the distinction between the two. The dropsy which was most common was of a very chronic description, and originated in the disease called painful crepitation of the fingers. The form of the tumour produced varied not only according to the size and shape of the sheath itself, but also according to the fibrous structures which bound it down; it was, however, nearly always lobulated, and was soft, fluctuating, and more or less diaphonous according to its depth from the surface and the nature of its contents. In many instances it contained great numbers of melon-seed bodies, which add greatly to its inconvenience, as well as to the difficulty of its cure. One of the most common seats of this disease was the large bursa in front of the carpus, and at this spot such tumour always contained melon seeds; the disease was therefore grave, not only on account of its contents, but also of its size. He (Mr. Barwell) had paid considerable attention to, and had made many dissections of, this part. (The anatomy of the bursæ was described by means of carefully-drawn diagrams.) He showed that there were two carpal bursæ,—the outer, around the flexor tendon of the thumb; tho other, lubricating all the fingers, so reflected as so divide itself into three cavities: one between the carpal ligament and the superficial tendons; the next between them and the deep tendons; the third between the deep tendons and the carpus itself. This division into three layers of cavity explained many peculiarities of the affections of this part. In dropsy thereof, with sero synovial lemon-seed contents, the bi-sacculated form of the tumour produced by the constriction of annular ligament, the fluctuation from palm to wrist, and a peculiar moist crepitation, were characteristic. The author observed that the chief object of the present paper had been to point out the difference in history and origin between cases in which a portion only of a synovial membrane was affected, as in the first-described form of tumour, which are true ganglia, and those other formations in which the whole of a synovial sac was diseased. Such pathological distinction must lead to a more definite and applicable treatment, as the means of curing an independent cyst would be different from those employed on a synovial cavity, or in a hernia from such cavity. A ganglion, when fully formed, he said, was an independent cyst, and might be treated as such by producing inflammation that should cause adherence of its walls; but if the tumour had not become independent, such means were dangerous. There were several signs whereby the condition of such tumours might be estimated, very slow reduction by evacuation of the cyst being the chief; and when it was found that an opening between it and the joint still remained, other means must be employed.

Mr. Barwell showed an ingenious instrument whereby pressure upon such tumours might be graduated, while perfect rest was obtained; and proceeded to read some cases in which the different forms of disease had been cured by adaptation of these and other means to each particular case.

WESTERN MEDICAL AND SURGICAL SOCIETY.

At the last meeting of the above Society, Mr. A. B. Barnes made some remarks on

OVARIOTOMY.

He had been led to the consideration of this subject by a case on which he had lately operated, and which was now progressing to a favourable termination. The patient was nineteen years of age; the disease under which she laboured was a large unilocular ovarian cyst, containing four gallons of fluid; there were no adhesions. Having given the details of this case, he adverted to his individual experience of operative procedure for the radical cure of ovarian dropsy, which extended now to 13 cases. In 8 of these (including that just alluded to) the cyst was removed from the abdominal cavity; in the remaining 5, the tumour, on account of adhesions, could not be extracted. Of the 8 removed, 2 died of the immediate effects of the operation, and 6 recovered, showing a mortality of 1 in 4, or of 25 per cent. Of the 5 cases in which the disease could not be removed, all recovered from the operation. Thus, in the 13 cases, the mortality was only 2, or 1 in 6½. He need hardly say, that as compared with other capital operations, this was a small per-centage of deaths; for instance, in amputations of all kinds, excepting fingers and toes, the mortality was 1 in 3; in the thigh it was 1 in 2½; in the leg, 1 in 3; in the arm, 1 in 3½; in hernia the deaths were as 1 to 2¼; in ligature of the subclavian artery the mortality was 1 in 2; of the common iliac, 1 in 2⅛; of the internal iliac, 1 in 2⅓; of the external iliac, 1 in 4⅛; of the carotid, 1 in 4⅔. In lithotomy, in the adult, the mortality was from 1 in 5 to 1 in 2, depending upon the age of the patient, and the size of the stone. In Civiale's cases of lithotrity the per-centage of deaths was 1 in 3. The most unfavourable statistics of ovariotomy were those collected by Dr. Robert Lee, published in the "Medico-Chirurgical Transactions" for the year 1851. Out of 162 cases as many as 60 could not be removed; in 5 of these no tumour was present. Of these 60 cases, 19 proved fatal, or rather less than 1 in 3. In the remaining 102 the disease was removed. Amongst these, in 1 case both ovaries and the uterus were excised; in another, the ovary with part of the uterus was removed; in 2 cases, both ovaries. Out of these 102 cases, 42 proved fatal, or about 1 in 2½. Dr. Clay, of Manchester, had had more experience in ovariotomy. In a paper read by him in August last in Edinburgh, he stated that he had operated in 79 cases, and that 55 of these had proved successful, the mortality being about 30 per cent, or rather less than 1 in 3. He expressed his opinion that for the future the mortality would not be more than 1 in 4, and that the existence of adhesions, so much dreaded, did not, as far as his experience went, interfere with the successful result. In these opinions the President perfectly coincided. Dr. Atlee, of Philadelphia, had operated in 36 cases, 12 of which were fatal, or 1 in 3. In 13 cases where the cyst was removed, occurring in the practice of Dr. Frederick Bird, taken from Dr. Lee's table, 4 were fatal, or rather less than 1 in 3. In 21 cases of removal recorded in Ranking and Braithwaite since the date of Dr. Lee's paper, 7 proved fatal, or 1 in 3. Hence we believed we were not only warranted in performing the operation in properly-selected cases, but that it was our bounden duty to recommend it. For the last twenty years this operation had been submitted to the proper ordeal of discussion in the medical press and in the medical societies throughout the kingdom, and the rate of mortality he maintained had been fairly established as at most 1 in 3. It had been said, that the favourable cases had, for the most part, been published, and that the statistics could not be depended upon. He believed that the favourable and unfavourable cases of ovariotomy performed during the last twenty years had been more closely watched and made known either by the operator or by those who were cognizant of their performance than had been the case in any other operation in surgery. If these cases were considered in the mass, he would ask why should not 200 sufferers from ovarian dropsy be saved out of every 300 by the peformance of this operation? we do not refuse to save 200 out of 300 suffering from other diseases where the mortality is similar. At any rate he, for one, did not hesitate to express his opinion that the time had now arrived when the profession would be wanting in their aid to the sufferers from this distressing and ultimately fatal disease if they withheld from them any longer the benefits to be derived from the performance of this operation.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

Extensive Disease of the Hip-Joint in a Girl; Operation; Recovery.

(Under the care of Mr. ERICHSEN.)

WE have endeavoured from time to time, as opportunities permitted, to bring the subject of excision of the hip-joint before the profession in our "Mirror," for the purpose of fairly estimating its value as a conservative measure, and drawing a comparison between it and excision of other joints. From the valuable series of cases which have appeared in our pages since the beginning of last year, the conclusion has justly been arrived at, that excision of the hip-joint is not only suitable when the head of the femur is diseased, acting as a foreign body, and keeping up a constant irritation, but that it is justifiable even when the pelvis is more or less affected, and that the portions of the latter in a state of necrosis or caries require to be taken away also. In fine, in almost any case of disease of the articulation generally, in which an exhausting suppuration is the result of necrosis of the pelvis or the femur, it is the duty of the surgeon to get rid of the effete and dead portions of bone. Mr. Hancock, we may say, first paved the way in setting aside the prejudices of surgeons against the operation when there was disease of the pelvic bones, and the success obtained by himself and subsequently by others, in the good results attending the removal of pretty extensive portions of the pelvis, is a fair guarantee of the propriety of the proceeding. Mr. Hancock has stated that the operation, though severe, was not attended with so much risk of injury to the pelvic viscera as some surgeons imagined, since wherever there was disease of the bone, the pelvic fascia corresponding to that disease became detached, and in most instances separated from the bone by an interval filled with matter, so that there was space to operate upon the bone without interfering with the fascia, which commonly becomes thicker from the deposit of lymph on its surface.

We append two instances in which excision of the joint was performed. In the first of these we saw removed the head and trochanters of the femur, the acetabulum, tuber ischii, and ascending ramus of the ischium. A part also of the ramus and body of the pubes was smooth and partly loose, with carious bone lying alongside. All these were removed, together with some carious bone of the dorsum of the ilium. The interior of the pelvis was necessarily protected by the pelvic fascia.—As detailed, the operation was necessarily a protracted one, and the patient was exceedingly low after it. This girl before the operation was rapidly sinking from hectic fever, and it was performed as holding out the only means left to save life. The spinous processes of the lower sacral vertebræ at this time protruded through open bed-sores. Nature in such a case as this was clearly unable to effect a cure; the immense quantity of necrosed bone was productive of so much irritation and discarge, that dissolution was daily expected. We watched her progress with some anxiety, and the change which ensued towards a cure was most satisfactory, and this continued we may say uninterruptedly up to the time she left the hospital, when the wound had not only completely healed, but the limb was straight and good. The following abstract we have taken from the hospital books:—

Anna F——, aged thirteen, a native of Newcastle, but resident in London for the last six years, was admitted Jan. 20th, 1858. She is of strumous habit, transparent skin, and of much mental activity. She has always enjoyed good health until sixteen months ago, when she had an attack of rheumatic fever affecting the four limbs, but the left hip most severely. After her recovery from this she was free from illness for some time, when she felt some pain in the left knee, and soon afterwards in the hip, which became much swollen. An abscess formed, and was opened, and she was then able to go about on crutches. She has continued much in the same state since then, the thigh being swollen a great deal; the abscesses discharged large quantities of pus. She has taken cod-liver oil for some time.

On admission her health seemed pretty good. The left thigh is much swollen and tense, and there are several sinuses, from which pus escapes. The limb is shortened to the extent of about an inch, and it is slightly inverted, adducted, and flexed. The flexion of the thigh upon the abdomen is not so great as it has been, but even now the pelvis is tilted forwards when the limb is extended, and this amount of extension has been attained by gradual daily extension. She has not had any pain in the hip for some time. Mr. Erichsen examined the joint by means of a probe, and found it to be extensively diseased, and surrounded by a large quantity of plastic matter.—She was then ordered cod-liver oil and iron wine twice a day; a bracket splint to the leg, and poultices to the hip.

Jan. 29th.—She was found to be suffering from hectic fever: pulse 136, small, weak, and wiry; cheeks deeply flushed; the discharge of pus amounts to about a pint in the twenty-four hours; she perspires at night. In consequence of the hectic fever and profuse suppuration, it was deemed advisable to have recourse to excision of the head of the femur, as the only means of saving the patient.

Feb. 1st.—Profuse suppuration continues. An abscess is perceived, on the application of the fingers to the inner side of the thigh just below the vulva. Appetite not good. To have four ounces of wine.

3rd.—All the febrile symptoms as before. The splint being removed, the patient lies on her right side, with the lower limbs drawn up; suppuration is very profuse. Chloroform having been administered, Mr. Erichsen proceeded to remove the head of the femur, after having ascertained that grating could be easily felt on rotating the limb, and, by means of the long steel probe, that the joint was extensively diseased. A T-shaped incision was first made, the flaps reflected, the femur pushed up so as to dislocate it, and the head was then sawn off with Butcher's saw, after the separation of the muscular attachments. The head of the femur was found to be absorbed. Some large osseous masses were found around the acetabulum, which were removed, as they were necrosed. On examining the pelvic bone a little more, it was found that the tuber ischii was also diseased; so Mr. Erichsen excised it, by means of the common cutting pliers, introducing one blade into the obturator foramen and the other outside. The patient, having now partially recovered from the effects of the chloroform, but still insensible to pain, was somewhat collapsed; the pulse was almost inperceptible, face pale, surface of the body cold. She lay in a semi-conscious state; a little brandy-and-water, however, had the effect of reviving her and restoring the pulse. The wound was plugged with lint, and a couple of sutures put in and tied. The bracketed long splint was then re-applied.

4th.—Has passed a good night, and slept pretty well; pulse 136, stronger, but still small; tongue clean; appetite pretty good; complains of numbness in the foot, with loss of sensibility of the skin of the foot. Wound not disturbed.

6th.—Is still weak, but sleeps well, and perspires less than before the operation. Pulse 130.

13th.—Continues to progress favourably; the abscess on the inner side of the thigh has spontaneously opened; the discharge of pus from the wound, as well as that from the abscess on the inner side, is rather abundant, of a greenish-yellow colour, rather thin, and acid.

21st.—Cheeks still flushed occasionally; wound dressed with red-wash; perspires but little during sleep. Ordered, citrate of iron and quinine three times a-day.

26th.—The lips of the wound are now brought together by plaster.

March 2nd.—Splint changed for a lighter one. Her progress from this time was satisfactory, the discharge from the wound became less, and it granulated nicely. An abscess opened spontaneously at the upper and fore part of the thigh on the 21st., which ceased discharging in ten days; but that at the back-part of the thigh began to re-discharge on the 5th of April. On the 12th of April, the report states that the wound had skinned over, and contracted round a sinus about its centre, through which a probe could be passed some distance into the interior of the thigh. On the 10th of May, a leather splint was substituted for the longitudinal one, having a cross piece embracing the pelvis, and a vertical piece reaching to below the knee, on the outside. A semi-circular scale of bone was removed from the sinus left above the seat of operation on the 15th of May, supposed to be a piece of the cut end of the femur.

On the 16th of May she got up for the first time; the sound leg was, however, too weak to stand on, so she sat in a chair. She left the hospital on the 20th of May to return home preparatory to going to Margate. The sinus at the site of the operation still remains, and a probe passes up for some distance. There is but little discharge. Her general health is good; she has gained much flesh during the last month, and is now quite stout.

Disease of the Hip-joint in a Girl of ten years, with Hectic Fever; Excision of the Head and Neck of the Femur, and a portion of the Ilium; Strumous Degeneration of the Thigh.

(Under the care of Mr. Erichsen.)

In the following case the operation was also performed to remove the cause of the wasting hectic which would rapidly have destroyed the child. The notes of the case are not sufficiently full in this respect, but hectic fever was a prominent symptom. Here, however, the result has not been so satisfactory as could have been wished. The wound of the operation had pretty well healed; but the whole of the soft parts of the thigh have fallen into a state of strumous degeneration—that condition in which lowly-organized lymph is deposited largely in the limb, which is infiltrated by it down to the knee. In this a long sinus and abscess have formed, and Mr. Erichsen does not expect good results to ensue. There is this to be said, that the child will not be in a worse condition than if no operation had been performed. A chance of benefit was afforded her, and if it is not successful, it will eventually leave the limb in a condition often met with in cases of old hip-joint disease.

The abstract of the case we have taken from the hospital books:—

Emma G——, aged ten, an interesting looking and very intelligent child, was admitted October 9th, 1857. Her general aspect was that of struma. A pain in the knee, which extended up the thigh to the hip-joint, was the first symptom noticed. She took to her bed eighteen weeks ago, and was under treatment. Has had startings in the limb during the night, coming on suddenly. She bears gentle pressure, but complains when the leg or foot is moved; has especial tenderness two inches below the anterior superior spinous processes of the ilium. The limb lays flat on the bed, much wasted, and foot erected. Left leg half an inch shorter by measurement than the other. Pelvis oblique and directed forwards on the affected side. She was put on syrup of the iodide of iron, with manifest advantage to her general health. The leg was put up in a starch bandage on the 14th October, and on the 16th traction was exercised under chloroform.

October 24th.—Health good; not so much pain about the hip when the leg is moved. Ordered to get about with crutches. She left the hospital with the leg in a starch bandage and the foot in a sling, but was re-admitted in February, with a large abscess over the outer side of the hip-joint.

March 3rd, 1858.—A T-shaped incision having been made, and the head of the bone exposed, it was sawn off nearly on a level with the great trochanter with Butcher's saw; the whole of the head was denuded of cartilage, and the neck bare and softened, especially on its inner aspect. The great trochanter was next taken away by cutting pliers, and a small piece of the ilium gouged out. Very little bleeding, no vessels requiring ligature. A bracket splint was applied immediately, and linseed-meal poultices to the wound; one suture only used.

4th.—Very little febrile disturbance; appetite nearly as good as before the operation.

5th.—Doing remarkably well; no pain in the wound, and slept well during the night.

8th.—Wound discharges large quantity of pus; sleeps well; appetite not very good.

April 15th.—Doing very well; an abscess is forming near the wound, which burst five days after, leaving a large sinus extending down the thigh; this was subsequently injected with red wash.

May 3rd.—The sinus extends as far as the head of the fibula, laid open freely at its upper part; no bone can be felt with the probe; discharge copious and fetid. Continue syringing with red wash; the leg to be elevated on pillows, so as to allow the pus to granulate out of the sinus.

7th.—The discharge less abundant and less fetid.

A short time after this the patient left for the Infirmary at Margate.

Congenital Syphilis in an Infant a few weeks old.

(Under the care of Dr. Hare.)

The following case, reported by Mr. Frederick B. White, illustrates in a well-marked manner, the length of time that the syphilitic taint may remain in the system of parents, and, without any fresh infection, the mother continuing to all appearance quite healthy, communicate itself to several children in succession.

The father of the little patient in question contracted syphilis about the time of his marriage, six years ago, and communicated it to his wife, who had been previously quite healthy. They were both treated with mercury, and recovered without any secondary symptoms making their appearance, except in the case of the man, who had sore-throat. He has also every year since been troubled with a discharge from the penis, continuing for a short time, but he strenuously denies having contracted any fresh disease, and his wife has not been affected since her first attack.

The mother has had a family of five children, all of whom have been affected with the syphilitic virus to a greater or less extent, with the exception of the eldest, which died within two hours of its birth, and the second, which was prematurely born. The third child lived between three and four weeks. Constitutional symptoms manifested themselves at the commencement of the second week, in the shape of a cutaneous eruption on the nates and lips, and a syphilitic affection of the eyes, the throat and fauces being also affected. The fourth child is two years and a half old. The only sign indicating the constitutional taint was an eruption on the nates, together with some scattered spots on the face, which, however, soon disappeared under treatment. The fifth child—Joseph L——, the patient under consideration, is an infant eight weeks old, and presents in a well-marked degree that shrivelled and wan appearance and flabby state of the muscles constituting the syphilitic cachexia. From birth it has suffered from that syphilitic affection of the mucous membrane of the nose and fauces which gives rise to the characteristic snuffling noise during respiration. It, however, had no eruption on the body till about three weeks since, when a few circular, slightly elevated, dusky patches made their appearance on the chin, the scrotum, nates, and upper part of the thighs. The child was brought to the hospital about a fortnight since, and the case having been recognised by Dr. Hare as one of congenital syphilis, the infant was treated with small doses of mercury in the form of mercury-with-chalk. It is now considerably improved.

It will thus be seen, from the foregoing account, that out of five children, at least three were certainly affected by the syphilitic virus, one of the three being the youngest of the family. Of the remaining two, although there is no positive evidence to prove the existence of the syphilitic taint, yet the presumptive evidence is greatly in favour of its presence, all the children born subsequently being decidedly affected. It is also highly probable that it had at least something to do with the premature birth of the one, and the death two hours after birth of the other.

Popliteal Aneurism cured by compression, Pulsation ceasing in three days and a half.

(Under the care of Mr. Erichsen.)

We are indebted for the notes of the following case to Mr. John Castaneda, the dresser of the patient:—

George W——, aged thirty-three. Has always enjoyed good health; father and mother both dead; the mother died of apoplexy, and the father of some renal affection. The last fourteen years his occupation has been that of a wax-fitter to her Majesty, which has entailed a good deal of standing. During the last six months the patient has been troubled with a pain of a somewhat dull, aching character in and about the region of the right knee-joint. It was considered by him as being of a rheumatic character, and he took no futher notice of it at the time. About a fornight since his attention was attracted to the existence of a tumour in the right ham. This tumor was the seat of a throbbing pain, which gradually increased in intensity.

On the 14th July the patient was admitted an in-patient of this hospital. Mr. Erichsen on examination found a tumour about the size of a goose's egg in the popliteal space, over the situation of the artery. This swelling was somewhat more prominent on the outer than on the inner side. On manipulation, a distinct pulsation, synchronous with the heart's action, could be felt, which was arrested by the pressure of the finger on the femoral artery, and immediately returned on the removal of the pressure. There was also a distinct bruit. All the usual symptoms of popliteal aneurism were manifest. At three P.M. the limb was bandaged from the toes to about two inches above the knee. The thigh was shaved and dusted with flour. Two tourniquets were then applied, one to the groin, and the other was placed over the thigh a little above its middle, about six inches below Poupart's ligament. The upper tourniquet was then screwed up so as to compress the femoral artery as it crosses the pubes, when the instrument was seen rising and falling at each pulsation. The patient experienced no pain.

Pressure was then kept up till eight o'clock, when the lower tourniquet was tightened and the upper one unscrewed. Deep seated pain was now experienced by the patient at the seat of compression, and in two or three hours after the application of the tourniquet a peculiar tingling sensation, scarcely amounting to pain, as if, to use the patient's own word's, "the blood were crawling up close to the skin" was felt over the knee. The foot was rather numb. The temperature was slightly lower than that of the opposite leg.—At twelve P.M. the upper tourniquet was reapplied, and the lower one loosened. The patient felt much easier as soon as the pressure of the lower tourniquet was removed.

15th.—Compression was maintained till six A.M. The lower tourniquet was then screwed up. The same sensations were now experienced by the patient as on the former application of this tourniquet. A distinct pulsation could be seen and felt over the situation of the " arteria anastomotica magna" during the whole time, which in the opposite limb was not perceptible. The patient passed a sleepless night.

17th.—At eleven P.M., the lower tourniquet was still applied.

18th.—At one A.M., the upper compression was re-applied a little higher up than before, over the situation of the external iliac. A sensation of fullness in the popliteal space was experienced by the patient. This sensation came on at intervals, and lasted the whole night. The lower tourniquet was screwed up at half-past four A.M.; it was placed a little lower down, as the patient complained of great irritability of skin. He stated that it seemed to him as if the blood pressed against a certain point in the popliteal space which it experienced a difficulty in traversing, and then at length, after overcoming the obstacle, ease was experienced. This occurred at irregular intervals, and lasted about two or three minutes each time, but it was only experienced when the lower tourniquet was applied. Pressure was kept up till half past-seven A.M. by the lower tourniquet. The application of the lower tourniquet was much more painful than that of the upper one. The posterior part of the leg over the course of the posterior tibial artery, and also the outer side of the leg from the external malleolus to two inches above the knee-joint were extremely painful. The patient complained of shooting pains from the foot to the under part of the knee, sometimes extending up the thigh to the tuberosity of the ischium. Once he complained of a darting pain from the foot of the affected limb to the groin of the opposite side. No pulsation was perceptible over the seat of the aneurism. He spoke of a trickling sensation from a little behind the inner side of the knee, and extending as far as the situation where the seat of fullness was complained of.—This was occasional, and immediately supervened on the least movement on the part of the patient. He passed a very restless night. The shooting pains prevented him sleeping till morning.

20th.—Patient very restless. The tourniquets were kept on between an hour and a half and two hours alternately. Great irritability and numbness of limb existed. The difference in temperature between the limb affected below the seat of compression and the sound limb was extremely marked; the patient complained of the cold, and requested to have the foot covered with cotton wool. The pain was more intense, deep seated, and continuous; less frequently shooting. The thigh above the bandage was hot. The feeling of fullness about the knee was much talked of by the patient. The seats of the tourniquets were changed, the upper one being moved lower down, and placed about three inches and a half below Poupart's ligament; and the lower one was moved up till it was brought into close proximity with the upper one. The leg was considerably swollen, the knee felt tight and numb, but there was no pain in the latter situation except when the lower tourniquet was pressed against the bone, and the pain was of a dragging character.

21st.—At one A.M., on unscrewing the instruments, all pulsation was found to have ceased in the tumour. The instruments were, however, screwed up again. The patient complained of pain in the aneurism and down the outside of the leg. He had not passed so bad a night since his admission to the hospital.—Two P.M.: At the visit, Mr. Erichsen found the tumour solid and without pulsation. Pain was still complained of. The instruments were reapplied as a measure of precaution, and ordered to be kept on for forty-eight hours longer.

23rd.—Instruments taken off. Tumour solid and pulseless. Pain in leg on the outer side. Pulsation in the femoral artery can be felt down to below the middle of the thigh; no pulsation in either tibials. Foot somewhat colder than the other, but movement and sensibility in the toes perfect. No artery can be traced over the patella or anterior part of the thigh, but one about the size of the temporal can be felt pulsating along the outer side of the popliteal space. A slight compression was kept up by a bandage, and the patient directed to remain in bed.

24th.—Going on favourably.

28th.—Discharged, cured.

SAMARITAN FREE HOSPITAL.

Prolapsus of Uterus; Rupture into the Rectum, with destruction of the External Sphincter.

(Under the care of Dr. ROUTH.)

THE following instance was an example of severe recto-vaginal fistula, associated with prolapsus uteri, which was submitted to three different operations before a cure of this inconvenient and painful deformity could be accomplished. This was, however, attained, and the patient left the hospital much improved in general health and strength.

S. F——, aged thirty-six; married nine years, and had had three children, the last three years ago. She was then in labour forty hours; instruments were used, and the child was born alive. She kept her bed only seven or eight days. A month after, when lifting a heavy weight, she felt something give way, and the womb came down. She lost some blood, but reduced it herself. It comes down now after much walking.

Examination.—Womb completely prolapsed with vagina; os large, congested, and ulcerated. When the parts are reduced, the rectum and posterior part of vagina are found to communicate by a large, triangular-shaped opening, about an inch and a quarter in length by as much in breadth at the inferior part. The external sphincter was completely cut across; the internal, at the apex, was intact in several fibres, so as to admit of her retaining her motions. Ordered to be well purged, prior to the

First Operation.—The vaginal mucous membrane was denuded on each side, together with about a quarter of an inch of external skin, extending upwards to about half an inch from the upper portion of the vagina, and posteriorly within its cavity to about one inch above the apex of the fistula. The wound was brought together by two deep quill sutures, and several small superficial interrupted sutures, excepting quite inferiorly opposite the anal commissure, this opening being left to form an artificial anus. A good deal of blood was lost. She was then put to bed, and kept under the influence of opium.

The patient was very sick for the two following days, and spite of the remedies employed, this did not yield till the third day. On February 1st the sutures were removed; the third or inferior quill suture was then found to have given way; union appeared complete. On the 8th of February she was much better, but there was still a recto-vaginal fistula that admitted the forefinger just within the opening. Purgatives were given. The patient left the hospital on the 25th, expressing that she felt much comfort; but the fistula, although smaller, persisted.

Readmitted April 30th. On consultation, it was deemed advisable to perform the same operation again. This was accordingly done on May 3rd, the bowels having been first well opened. The new perinæum was split open by a bistoury; but the internal sphincter was not cut, owing to the presence of a large artery. This time there was no sickness, and union was complete on the third day, when the sutures were removed. The case progressed satisfactorily. On the 9th of May, however, there was a passage of blood per vaginam, and a large clot. This the patient believed to be catamenial, but it did not recur the next day. On examination, a large mass of fæcal matter was found impacted in the rectum. An injection, with a long tube, was given, and subsequently a large dose of castor oil. The mass had, however, to be broken by a spoon before it came away; when it did so, a small portion came out per vaginam, with some hæmorrhage. On the 13th, an examination proved that a fistula had again formed, such as would admit the little finger. *In situ* it appeared transverse, the mucous membrane so loose, however, about it, that, with one finger in the vagina and the other in the rectum, the opening could be readily closed by gentle traction from behind forwards. The patient was put on tonics; and, the bowels having been well opened, it was decided to endeavour to unite the fistula by a

Third Operation, on May 24th. An anal speculum being passed per rectum, a quantity of vaginal mucous membrane protruded through it. This was cut, and the speculum removed. A silk ligature was then passed through the vagino-rectal septum, and this was pulled down and the edges pared. The upper border and internal surface of the artificial anus was in like manner pared. Three buck-shot were now attached each to a silver wire, which were passed through, first, the recto-vaginal septum, and, secondly, through the upper portion of the artificial anus, and there secured by a clamp and six other shot.

On the 29th, union was complete. Two of the shot had made their way outwards; the last was still firm, and this was removed. The patient gradually improved in health, and left the hospital on June 5th, cured. As far as the finger enabled one to judge, there was no opening, and water injected per vaginam did not pass into the rectum, and *vice versa.*

CHARING CROSS HOSPITAL.

Strangulated Femoral Hernia in a Pregnant Woman; the Existence of a Double Sac.

(Under the care of Mr. Canton.)

Notwithstanding the many peculiarities sometimes associated with strangulated hernia, the surgeon generally meets with a single sac, which may be large or small, according to circumstances. The sac in some instances assumes the most anomalous positions, and occasionally becomes divided into two or more cavities by the formation of septa. We append a very curious example of the latter, in which the sac was divided into two cavities by a distinct septum, presenting the appearance, on successively opening each before the hernia was reduced, of two distinct herniæ. The mode of its formation may be explained as follows: a large abscess formed over the hernia, and its increase probably reduced the rupture and acted as a pad to keep it so; at the same time, from the irritation so close in the vicinity of the sac, lymph was thrown out within, about its centre. The abscess having become cured, and the consequent pressure removed, the gut had again protruded and forced its way through the partition, so that a bilobate swelling resulted. The tightness of the aperture in the septum was well shown by the difference in colour of the fluid in each compartment of the sac, commingling being completely prevented. We have then, here, the existence of two strictures,—one in the usual situation, the other at the opening in the septum within the hernial sac, which could not have been relieved without opening it. The rupture occurred in a pregnant woman, also; and we know that pregnancy ordinarily reduces a hernia, and keeps it so during that eventful period.

A married female, aged thirty-seven, four months advanced in pregnancy, was admitted into the Charing-cross Hospital, under the care of Mr. Canton, suffering from strangulated femoral hernia of the left side. She had laboured under the rupture for several years, and had been accustomed to wear a truss,—the use of which, however, she had discontinued in consequence of the formation of a large abscess around one of the inguinal glands situated over the swelling. When admitted, the patient was found to have a hernia somewhat larger than a hen's egg, and placed over Poupart's ligament; the skin covering it presented an irregular cicatrix nearly an inch and a quarter in length, and was not very movable on the subjacent parts. As all the usual means for reduction had been already employed, and the symptoms being, on admission, such as to negative the propriety of a reiterated trial of any of them, Mr. Canton proceeded to operate, the patient having been placed under the influence of chloroform. No peculiarity presented itself until the sac was exposed, when the tumour was found to be constricted by a dense fibrous band, a few lines in width, and passing around its short axis, so as superficially to divide it into two swellings,—a larger one inclined to the femoral ring, and a smaller one directed to the anterior spines of the ilium. The sac of the former was now opened, when some blood-tinged fluid escaped, and, the aperture having been enlarged, the omentum and small intestines were exposed. The sac of the latter was next incised, when a smaller amount of light-coloured serum flowed out, and on extension of the incision some intestine was brought into view. In both instances the bowel was in a congested condition, but retaining nevertheless its natural polish. It was now seen that a tough, thick part of the sac, and the situation of which had been indicated at the surface by the constrictive band already mentioned. This septum would have been complete, but for an opening which existed in its deepest portion, of very small size, but through which, nervertheless, the intestine had become insinuated from the inner compartment of this two-chambered sac, so as to form of itself a *knuckle* in the outer one. Mr. Canton now passed an ordinary probe through the aperture, and cautiously divided the partition from the surface down to it, thereby laying the two cavities of the sac into one. The stricture at the femoral ring having been relieved by a slight incision directed upwards and inwards, the intestine and omentum were readily reduced. A few stitches were employed, a pad and spica bandage adjusted, and an opiate administered. The result of the case was unfortunate, as the patient miscarried during the night and shortly afterwards expired.

ST. MARY'S HOSPITAL.

Strangulated Femoral Hernia, with acute Phthisis; Herniotomy; Recovery from the Operation; Death from Phthisis.

(Under the care of Mr. Coulson.)

The influence of tubercular disease of the lung over the progress of coincident traumatic affections has been much discussed. It is undoubtedly unfavourable. In the case we here briefly record, however, the patient, the subject of advanced phthisis, became suddenly affected with strangulated femoral hernia; and, herniotomy being practised, her recovery from the effects of the operation advanced by equal steps with her rapid decay from phthisis, and the complete cure from hernia was apparently only prevented by her death from the lung disease.

Jane B——, aged fifty-four, was admitted into the operation ward of St. Mary's Hospital, June 23rd, 1858, having been transferred from the care of Dr. Chambers, who was treating her for phthisis. She was the subject of strangulated femoral hernia; and there was constant sickness. Herniotomy was performed by Mr Coulson in the usual manner. The fasciæ were firmly adherent to the sac, and the intestine was found to be of a livid colour. The stricture was divided, and the bowel returned. The wound healed favourably after the operation. She was troubled with persistent sickness. The phthisical symptoms became rapidly more serious; there was profuse expectoration and much sweating. She was well supported with tonics, and the bowels were opened under the influence of injections, and subsequently of gentle purgatives. She grew gradually weaker, and died suddenly on the 19th July. At the post-mortem examination the right lung was found to be riddled with abscesses, of which one of the largest burrowed into the liver. The wound following the operation had completely healed internally; superficially, union was not yet fully established.

KING'S COLLEGE HOSPITAL.

Stone in the Bladder of a Man, aged seventy-nine. Lithotomy; Removal of five large Calculi, weighing altogether four Ounces and three quarters.

(Under the care of Mr. Fergusson.)

There were two circumstances of some interest present in an operation for stone recently at the above hospital—namely, the age of the patient, and the number of calculi removed. The patient was seventy-nine years of age, but looking many years younger. Resided in the country. He had been affected with symptoms of stone for six years, perhaps much longer, and experienced much misery and suffering. Two months ago he resolved to see Mr. Fergusson, but got timid, and put off his journey to town; a few days ago, however, he came up, and was admitted into the hospital. He was sounded, and several calculi were very readily detected, from which circumstance, as lithotrity would have proved almost an endless operation, the more suitable one of lithotomy was chosen.

On the 17th of July, when fully under the influence of chloroform, the lateral operation for stone was performed, and when the step had arrived for withdrawing the forefinger of the left hand from the bladder, the forceps was dextrously introduced, and a copious gush of urine threw a calculus between the blades, which were gently withdrawn. A second stone was now removed. All the urine had now escaped, and it was not so easy to detect another stone; a searcher was now introduced, when one was detected and removed. A fourth and a fifth stone were discovered in the same manner, and removed; and the bladder was found to be at last quite free. An anodyne was finally introduced, and the patient was sent to the ward. Of the five stones which were extracted, each one was as large as a good-sized walnut, and of itself enough to be the source of unbearable pain and torture to the patient; their total weight was four ounces and three-quarters. In composition they seemed to be a mixture of lithates and phosphates, but this is conjectural. Since the operation, the old man has gone on pretty well, and, we trust, will make a good recovery. We will, however, on a future occasion, make our readers acquainted with the result.

It is a fact well known to surgeons, that patients at such an advanced age as this often undergo lithotomy as well as those of a much earlier period of life. But when we come to the question of mortality, Mr. Coulson states in his work, "On Lithotomy," that "from 50 to 60, and 60 to 70, the relative mortality appears to be very nearly the same, the difference in favour of the former period being a mere fraction. Beyond 70, however, the number of cases is so small, that no deduction can be safely drawn from them." He mentions that he had performed lithotomy on a patient in his 81st year, with success, in 1852.

Mr. Fergusson remarked, in some observations on the case, that the number of stones will make no difference in the progress of the case after the operation, although there are some surgeons who think otherwise. A single stone, of the aggregate weight of the five removed, would have produced more inconvenience and danger than where there are several. Some years ago Mr. Fergusson removed eight calculi from a patient, 69 years of age, in whom the operation was undertaken as a last resource; the patient had not an hour's illness after it, and made an excellent recovery.

It is no uncommon circumstance for more than a single stone to be found in the bladder. Thus, on the 1st inst., we saw Mr. Tatum remove two, of unequal dimensions, from the bladder of a thin, flabby child. From two to six or eight are common proportions, but instances have been placed on record in which not only dozens, but actually hundreds of calculi have been found, and we cannot here forbear referring to Dr. Physick's remarkable operation on an American judge, in the United States, from whose bladder upwards of a thousand calculi were removed, varying in size from a shot to a bean.

Extensive Nævi Materni cured by operation.

(Under the care of Mr. Wood.)

A female infant, aged fourteen months, is affected with nævi on the right side of the head, face, and neck, and also on the right thigh and buttock. Over the parotid gland, below and in front of the ear, there is a subcutaneous nævus about the size of a small pullet's egg, swelling very much when the child cries. The skin above is entirely unaffected. At the back of the neck on the same side are two elongated transverse swellings, over which the skin is somewhat discoloured by nævoid reticulated vessels. A similar condition is present upon the upper eyelid. On the temple and side of the head the skin is thin and atrophied, translucent and traversed by many enlarged vessels. It is drier than natural, from the paucity of the sebaceous glands. Upon the right buttock is an irregular, nodulated, very red, nævoid growth, which extends down the thigh for some distance; from thence to the foot the skin is thin, dry, and marked by enlarged vessels.

About a month ago Mr. Wood operated on the latter. It had been previously treated by the application of nitric acid at one of the London hospitals, but the resulting sore had been so painful and slow to heal that the parents strongly objected to a repetition of that treatment. The nævus had been, however, entirely destroyed at the place operated on. The plan practised by Mr. Wood consisted in passing a worsted thread, dipped in iodine paint, superficially through the nævoid growths by a blunt needle in the direction of the lines of longitude on a globe map, through two punctures of opposite points, the thread being left in loops protruding at the punctures. A disk of flat wood, of the size of the part operated upon, having two projecting points opposite the punctures, was then placed upon the tumour, the loops slipped over the points, and the thread tightened. In this manner were combined the effects of constant pressure with the stimulating action of the iodine and worsted in the interior of the tumour. The effect was speedy and complete obliteration of the disease at the point operated on, leaving only two very small scars at the points of puncture.

The tumour on the parotid having increased rather rapidly in size of late, on the 24th July Mr. Wood applied a subcutaneous knot or clove hitch, which he has devised and practised several times with success. A long needle with a short curve, mounted on a handle presenting one shoulder only on the concave side, to facilitate the elevation of the point through the skin, is threaded with a long piece of strong, well waxed and greased, ligature string. This is the only apparatus required. The needle was first passed round one-half of the circumference of the tumour, close under the skin, and brought out at a point opposite the first puncture in the skin. One end of the thread being left, the needle was then withdrawn, still bearing the thread. Next it was passed directly across under the base of the tumour through the same punctures, the tumour being well lifted up by the finger and thumb of the left hand. A loop of the string was this time left in the track of the needle, which was then passed for the third time round the remaining half of the circumference of the tumour close under the skin, after which the end of the ligature was entirely disengaged from the needle. Thus we have two ends of a single string, passing in opposite directions, with an intervening loop, all emerging from the puncture opposite to that formed by the first insertion of the needle. The ends were then passed each through the loop, so as to cross within it, and afterwards were drawn tight and firmly tied in a loop-knot or bunch. This enables the surgeon farther to constrict the tumour when shrunk by the process of cure. A slight puckering of skin between the punctures and the protruding loop-knot were the only remaining evidences of the operation, which occupies a much less time in its performance than any other of the many operations for this deformity. Besides the simplicity, ease and celerity, of its performance, and the power of re-tightening above mentioned, this method of operating gives very little pain to the patient, leaving only two small puncture cicatrices, and entails no loss of skin whatever, thus obtaining a great desideratum in operations about the face and neck. Two small linear sloughs are usually formed in the track of the ligature, which readily escape on the withdrawal of the latter in about a week or ten days. The constricted portions seem to degenerate into fibrous tissue, their slender connexions with the superjacent healthy skin being insufficient to keep up the nævoid dilatation of the vessels.

WESTMINSTER HOSPITAL.

Fungus Testis; Syme's Operation; Extreme Sloughing; Recovery.

(Under the care of Mr. Holthouse.)

Our "Clinical Records" occasionally contain examples of the treatment of hernia testis, and of the plan of treatment chosen by the surgeon. We have seen the protruding portion of the testicle shaved off almost to a level with the fibrous tunic which forms its natural covering, the parts being then brought together, and cicatrization follow. This practice is, perhaps, commendable when the body of the gland has become thoroughly disorganized from disease or some other cause; but when the protrusion has occurred by the perforation of the proper fibrous tissue, the result of an abscess, or of ulceration arising from inflammation, without disintegration, if we may be allowed the expression, of the proper structure of the testis, then the operation recommended by Mr. Syme is resorted to with advantage, and rarely does it not succeed, unless unsuspected malignant disease has been present. We present our readers with two examples of this affection treated by the latter method, both of which turned out well, although the first was attended with sloughing owing to causes existing at the time in the wards.

We avail ourselves of the notes of the following cases through the kindness of Mr. Theophilus W. Trend, the dresser of the patients:—

Thomas C——, aged thirty-two, looking pale and very much out of health, was admitted on January 14th, with a dirty-looking ulcer on the scrotum, over the right testis; its edges look sharp and unhealthy, and in the centre the testis protrudes as a kind of fungus; the other part of the testicle is much swollen; it has, he says, a twitching kind of pain in it.

History.—He says he always had good health; is a labourer, and does any kind of work that offers. Nine months ago he was on the tramp, and while walking with his hands in his pockets, felt his right testicle was swollen and painful to the touch; he had no advice for it, and says it was larger sometimes than at others. He had gonorrhœa five years ago. A fortnight ago, as he was getting into a cart, he says his testicle burst, and a little watery fluid came out. It then got larger and worse every day, and instead of being watery the discharge became thick, and offensive smelling. To have a linseed-meal poultice.

Jan. 19th.—As it was increasing, and looked very unhealthy, the strong nitric acid was applied over the whole surface.

23rd.—It has not increased, but still looks unhealthy; the slough formed by the acid has not been flung off. A linseed-meal poultice to be applied.

26th.—It has increased much; the testis protrudes considerably, and seems to be pushed out from behind.

Operation.—The patient having been placed under the influence of chloroform, the sloughs that remained on the testis were removed with scissors; the edges of the scrotum surrounding it were then pared with a scalpel, and that covering was dissected from the gland for a considerable distance, so as to enable it to cover the testis, which was then done; the edges of the scrotum were then brought together, and maintained in apposition by means of the quill suture; a pad of wet lint was then placed over it, and the patient put to bed.

27th.—Has passed a restless night, having refused to take an anodyne draught; complains of slight pain; the scrotum is moderately swollen; otherwise doing well. Ordered, anodyne draught at bed-time; an effervescing draught every three hours; and a lotion of an ounce of laudanum to eight ounces of water.

28th.—One side of the scrotum has begun to slough, and destroyed the skin through which the sutures were passed, leaving a gaping orifice through which the testis is seen; a large quantity of fetid sanious fluid fills up the space between the scrotum and testis. To have four ounces of brandy, and twenty minims of laudanum, in camphor mixture every three hours.—Eight P.M.: The sloughing is extended, and there is much pain in the part; has had no sleep and the bowels have not acted. A large quantity of highly fetid fluid was washed out of the scrotum, first, with warm water, and then with zinc wash; a small quantity of laudanum was then poured in, and a piece of dry lint placed between the scrotum and testis, to soak up the discharge.

29th.—Two P.M.: Was not dressed this morning, as the patient was asleep; general appearance improved, complains of no pain, but has nausea after taking food; the sloughing has not extended, the fetid discharge has diminished, and the exposed testis is partly covered with healthy granulations, secreting laudable pus. Pulse 74, of good character; bowels quiet. Continue treatment.

30th.—Passed a good night, and is tolerably free from pain; bowels have acted from house-medicine given this morning; pulse 72, rather feeble; doubtful whether sloughing of scrotum has extended. Continue.

31st.—The appearance of the scrotum last night was still suspicious. It was dressed as usual: first washed with warm water, then with zinc wash, and lastly Battley's solution poured into the cavity, which caused a deal of smarting; a dose of mixture was then given, with twenty minims of Battley's solution added. He has passed a good night, and feels comfortable. The bowels acted of their own accord; pulse 68, good; the scrotum looks slightly improved; sound skin, of more natural colour, and less swollen; edges of sore less sharp; discharge less in quantity, and of a more healthy character. To continue the medicine.

Feb. 2nd.—Complained of some sickness last night, notwithstanding which he slept well, and feels comfortable this morning. The sickness has left him; bowels have not acted again; pulse 62, more feeble. The parts continue to improve; healthy granulations having sprung up all round the cut margin of the scrotum; the slough of the testis is loosening, and laudable pus is secreted.—Repeat the medicine.

3rd.—The slough was removed with the scissors, and the testis pushed back into the scrotum; the edges of the latter were brought within a third of an inch of each other, and retained in position by soap plaster. This was done under chloroform.

4th.—The dressings were removed this morning, and the testicle exposed, the edges of the scrotum having receded; the wound was cleaned, and the edges of the scrotum reapproximated with common strapping.

5th.—The wound has again burst open, and, on the dressings being removed, the surface of the exposed testis was found dry and unhealthy-looking; it was well washed, and the cavity freed from discharge; it was then pushed back, the edges of the wound brought together and so retained by four interrupted sutures; a piece of dry lint was placed along the line of sutures, and two strips of plaster across to support them.

6th.—The parts look healthy, the sutures are all in place, and the discharge, which is less in quantity escapes freely from the intervals between them.

20th—The cavity is mostly filled up by granulations. He has been walking about the ward since the 13th.

March 2nd.—The gap is filling with granulations between the edges of the scrotum, which are skinning over, Zinc wash is applied to it.

16th.—Wound has healed, and all swelling of testis subsided.

The patient, who had improved much in health, was discharged.

Fungus Testis; Syme's Operation; Recovery.

(Under the care of Mr. Holthouse.)

Henry G——, aged thirty-eight, a cachectic-looking man, by trade a baker, was admitted into St. Luke's ward on the 23rd of February, 1858, with a fungoid protrusion of the left testis. The scrotum on both sides is enlarged and œdematous, and the integument has a deep red colour; the left testis is considerably larger than its fellow of the opposite side; the protruded portion, about the size of a shilling, is soft and of a yellow colour; the edge of the scrotum surrounding it is irregular and not adherent to it, and the probe can be passed round it to the depth of half an inch. It discharges a thin fluid, and is not very painful.

History.—He says that five years ago, while carrying a sack of flour up a ladder, he fell down, but did not think he had hurt himself; twelve months after this, without any apparent cause, his left testicle began to swell, and became very hard; at the same time he felt an aching kind of pain in it, as well as in his hip and loins. He applied some lotion to it, which eased the pain, but the swelling still remained, and has done so ever since. About six weeks ago, without noticing any pain, he found it had broken, and was discharging a thin kind of matter. Soon afterwards he became an out-patient of this hospital, but getting worse, he was admitted. Linseed poultice applied.—Quinine and iron mixture, one ounce, three times a day.

Feb. 27th.—The parts surrounding the wound are less irritable and tense. Strong nitric acid was applied over the slough, and a piece of dry lint placed on it. Repeat mixture.

March 2nd.—The slough of the testis, having nearly separated, was removed with the forceps; the aperture through which the testis protrudes evinces no disposition to heal. Continue treatment.

6th.—The margin of the scrotum is adherent to the protrusion for about a fourth of its circumference; the scrotum is of a more natural colour and less indurated.

9th.—Syme's operation performed. The edges of the scrotum were quite rotten, and gave way under the grip of the forceps; they were brought together and kept in apposition by quill sutures placed about three-quarters of an inch from the cut margin of the scrotum.

10th.—Scrotum much swollen, red, and œdematous; penis slightly œdematous, but not red. Did not sleep last night, though he took twenty-five minims of the tincture of opium. He has vomited, and his bowels have been opened three times. Three punctures were made in the scrotum, and the lower suture was removed. To have four ounces of brandy. Repeat mixture.

11th.—Much flushed, but has just taken some brandy. Pulse 130. Slept well last night.—Scrotum less red and swollen, but ulcerated apparently by one of the bougies; and its edges are adherent in the upper three-fourths of their extent.

13th.—The sutures were removed yesterday, and the wound has not gaped. Swelling and redness of the scrotum and penis have subsided. Water dressing was applied. Repeat mixture.

20th.—Two small openings exist in the situation of the incision, through which a small quantity of pus exudes. Zinc lotion to be applied.

April 6th. Since the last date the openings have been injected with zinc wash, and the upper one has closed; from the lower, not larger than a pin's head, a little matter exudes. No difference is apparent in the size of the two testes and cords.

The patient, who had gained flesh and healthy looks while in the hospital, was discharged.

The benefit of Mr. Syme's operation appears from these cases to be great, inasmuch as it leaves the patient's testicle sound and the scrotum without any great scar; at the same time there can be no doubt that the constitutional treatment is of very great importance.

GUY'S HOSPITAL.

Popliteal Aneurism Cured by Compression, Pulsation ceasing in Forty-two Hours.

(Under the care of Mr. Hilton.)

The subject of aneurism, situated in various parts of the body, has been most fully illustrated in our "Mirror" for some years past. It is one so full of interest that it always commands attention, from the necessarily serious nature of the affection itself. On the present occasion, we avail ourselves of the opportunity to place upon record two examples of popliteal aneurism, in which the treatment by compression was most remarkably, and at the same time speedily successful. We must observe, however, that, as a general rule, compression is invariably tried in our hospitals, and not until it fails, or that the instruments cannot be borne, is the ligature resorted to. If it does fail sometimes, we think it may depend upon a want of the scrupulous attention to many of the minor circumstances associated with it, which, although in themselves apparently trivial, yet become of importance when taken as a whole. These should of course be rigidly carried out by the surgeon, and success in the majority of instances will crown his efforts, as in the illustrations we now place before our readers.

In the first of the two cases, pulsation entirely ceased in forty-two hours, on discontinuing the pressure, but Mr. Hilton ordered it to be continued a short time longer, although the tumour was perfectly solid, and accordingly it was kept on until the fifth day, when it was removed altogether, and the man left the hospital cured on the fourteenth day from its first application.

In the second case, under Mr. Erichsen, at University College Hospital, pulsation ceased in three days and a half, but the compression was kept up till the ninth day, when the tumour was found quite solid. The patient left the hospital cured also on the fourteenth day from the commencement of this form of treatment. It is a somewhat remarkable coincidence that these two cases should have been discharged cured in a fortnight. The ages of both patients were favourable for treatment, thirty-nine and thirty-three years. They form exceedingly valuable illustrations of the treatment of aneurism by compression, a method for which modern surgery is so much indebted to such eminent men of the Dublin school as Hutton, Bellingham, Tuffnell, Carte, and others, whose names will ever be honourably associated with aneurism.

For the notes of the following case we are indebted to the kindness of Mr. John Stafford Benson, one of the clinical clerks of the hospital:

Wm. W——, aged thirty-nine, bailiff, residing at Dulwich, was admitted, under the care of Mr. Hilton, July 22nd, 1858. His habits are temperate, and, with the exception of having had syphilis twenty years ago, he has never suffered from ill-health.

Previous History.—About four months ago he first felt a slight pain on the inner side of the left knee, which, he says, entirely ceased in dry, but returned in damp, weather, increasing in severity at each attack. Thinking it was merely rheumatism, or the effect of too much exercise, he paid no attention to it. About two months ago he observed a small swelling in the popliteal space of the left knee, which he noticed to pulsate. Not thinking it of any consequence, he merely applied flannel around the knee. The pulsation and pain increasing, together with the size of the tumour, he applied to Dr. Ray, of Dulwich, (about a week before his admission into the hospital,) who ordered a cold lotion temporarily for a few days, then took him to Mr. Hilton. This gentleman advised him to come into the hospital. He returned home, however, where he remained for three days, and kept pressure applied over the femoral artery by means of a clamp and of a weight, applied alternately in two different situations, to relieve the pain and irritation which would be caused by too long-continued pressure on one spot.

Present condition, on admission.—He is a muscular well-built man, of middle stature and healthy aspect. Complains of nothing but stiffness, accompanied with slight pain in the left knee. There is a pulsating tumour, about the size of a large hen's egg, in the popliteal space of the left knee, the pulsation of which is synchronous with that of the radial artery; no pain is experienced in it, the pain being altogether felt in the above-mentioned place. His health does not appear to suffer in any way; his appetite is good, and pulse 86. Was ordered to take as little fluid as possible, and a little ice to moisten his mouth.

23rd.—He cannot sleep on account of the pain, and was therefore ordered half a grain of opium powder every four hours. Pressure on the femoral artery was commenced at half-past four P.M. today, by means of the clamp and a weight of about twenty pounds applied alternately, the former at the apex of Scarpa's triangle and the latter a little above, so as to compress the artery just after its passage over the os pubis, some person being constantly at the bedside to see that they were properly attended to.

24th.—Four P.M.: The pressure of the clamp applied yesterday could not be borne for more than ten or fifteen minutes at a time, but a second was placed about midway between the former and the weight, being about the centre of Scarpa's triangle, which remained on for two hours; and by thus multiplying the points of pressure no further inconvenience was experienced from this cause.

25th.—Slept comfortably for some hours last night. At eleven o'clock A.M. (forty-two hours after the pressure was first applied) the pulsation was found, on discontinuing the pressure, to have entirely ceased.

26th.—Mr. Hilton advised the pressure to be continued for a short time, although no pulsation could be detected on its removal. The tumour was found to be perfectly solid and considerably reduced in size.

28th.—Very slight pressure has been continued for the last thirty-six hours, and is now completely removed. The tumour is quite solid, and three small arteries can be distinctly felt to pulsate in passing over its surface.

30th.—Doing well.

August 5th.—Mr. Hilton ordered a splint to be applied to the leg, to prevent movement of the knee-joint for a short time; and the man left on the 6th, perfectly cured.

During the whole time that pressure was continued, the heat of the leg affected was greater than that of the right.

Clinical Records.

CASTRATION FOR MALIGNANT DISEASE.

The diseases which may lead to the necessity for castration, as given in Mr. Curling's work on "The Testis," are the different forms of carcinoma, incurable struma, abscesses, and tedious sinuses consequent on inflammation, and cystic disease. We have given clinical records of most of these from time to time; but the most common form which demands this operation is carcinoma, and not unfrequently the medullary form. We saw the right testicle removed on the 10th ult., at Guy's Hospital, by Mr. Cock, from a man twenty-five years of age, who was married and the father of a family. His general health was good; but eight months ago he first noticed an enlargement, and this gradually increased, until latterly it has become rapidly much larger. There was no history of having received a blow, and there was no pain; there was a degree of fluctuation about it which indicated a surface of fluid. A needle was introduced a few days before, which gave exit only to a little blood. Mr. Cock suspected it to be malignant; for besides the suspicious character of the nature of the swelling, the cord was enlarged. An incision was made over it, and then a section into the body, when the gland was found to be completely disorganized from soft cancer. It was, therefore, removed, the vessels of the cord being tied before the tumour was detached. The cord consisted principally of a mass of tortuous veins in a varicose condition, but was not otherwise affected, and therefore held out a favourable prospect of cure from the operation.

In Mr. Coulson's case, the testicle was extensively diseased, as a result of inflammation, and removal was equally imperative, as in the foregoing instance.

THE CAUSE OF THE LATE FREQUENCY OF STONE.

Two other cases of stone in the bladder have come under our notice since the last observations we wrote upon this subject. One of these was in a child at the Royal Infirmary for Children, in whom the stone had passed from the bladder and got lodged in the urethra; it was removed by Mr. Cooper Foster by means of an incision in the perinæum and a good recovery has been made. The other instance, also in a child, at Guy's Hospital, who had been suffering from the symptoms of stone for some time, but much aggravated latterly. Mr. Cock performed Allarton's median operation upon him on the 17th August, and removed an oblong quadrangular stone the size of a horse-chesnut, the external coats being phosphatic, and breaking in the beaks of the forceps, whilst its bulk consisted of lithic acid. The child is doing well.

Now, the question has been asked several times, why it is such a large number of cases of stone have appeared at the various hospitals this summer to undergo relief by operation, and the best explanation of the fact we have heard from Mr. Cooper Foster at Guy's Hospital, which is to the effect that the continuous very hot weather which we have had this summer, much more so than for some years past, has produced unusual concentration of the constituents of the urine, from the large amount of cutaneous exhalations necessarily a consequence of the high temperature. All those persons, children especially, therefore, who have had stones in their bladders, have had their sufferings proportionately increased, and hence their application for hospital relief, when in many instances, where a calculus were not suspected, it has been found to be present, and the main source of the symptoms of urinary disorder. This explanation of Mr. Foster's also tells why so many small calculi were removed, because the symptoms owing to the warm weather brought the patient at a much earlier period under the notice of the surgeon. We should say in some instances the stone was remarkably small for the operation of lithotomy.

NASAL POLYPUS, REMOVED BY A NEW FORCEPS.

A young girl, aged about sixteen years, had a nasal polypus of the right side removed by Mr. Gant, on the 9th ult., at the Royal Free Hospital, by an instrument which he had contrived, which presented some points of simplicity and interest about it. The girl had one polypus removed three weeks ago by the same surgeon. She had been a sufferer for a long time. None of her relatives, so far as she knew, had ever been subject to nasal polypi. The base of the polypus was readily seized with the blades of the forceps, and separated with ease. No pain attended the operation, and but very little hæmorrhage ensued. We would recommend them to the notice of surgeons.

Mr. Gant afterwards stated, that having somewhat frequently had occasion to remove nasal polypi, he had experienced some difficulty, and even danger, in doing so with the ordinary serrated forceps. It was an unsurgical proceeding to attempt to detach a polypus from the nasal fossa by twisting its peduncle. Not to menton the acute pain of such an operation, it is also ineffectual. If the polypus be soft as usual, it is apt to come away piecemeal, and require more than one operation for its removal, or should the polypus be harder than usual, we may accidentally bring away a portion of either spongy bone between which it is more commonly attached, or we may, perchance, injure the delicate septum narium. Surrounded, indeed, as a nasal polypus is by delicate bony structures, we can scarcely venture to wrench it away from its osseous attachments without some risk of injury thereto. This misadventure is followed by "carious disintegration" of the exposed bone, accompanied by a fetid and persistent discharge.

To meet these difficulties, Mr. Gant has recently invented a pair of forceps, which *cut* and hold at the same time. One edge of either blade is finished off somewhat like that of an ordinary scissors; the other edge is broad and *rasped.* This combination of scissors and rasped forceps is a modification of the grape or flower scissors of the conservatories. The danger of hæmorrhage, on which so much stress is laid in the books, as the main reason for twisting rather than cutting a nasal polypus, would seem to be an error. Very little hæmorrhage attended the operation we witnessed. It would seem that the forceps in question sufficiently compresses the bloodvessels to arrest hæmorrhage, and Mr. Gant particularly called attention to the fact, that operations with his instrument "were as bloodless as they were painless." Nor in his experience did nasal polypi so removed return.

The new forceps were made by Messrs. Weiss, and may perhaps prove applicable for the removal of polypi in other situations besides those which grow in the nasal fossæ.

CONGENITAL VESICAL CALCULUS.

We have often heard the question asked, is stone in the bladder ever found as a congenital affection? This has particularly occurred when a very young child, under three years of age, who has had irritability of the bladder and other symptoms more or less indicative of stone, from, we may say, the hour of its birth. The records of surgery, however, scarcely refer to the subject; a very few examples indeed, if any, of congenital calculus, have been placed upon record. The urine of infants has occasionally been observed copiously abnormal with actual deposits of uric acid partaking sometimes of the character of gravel, which would lead to the conclusion that a stone may form before birth. Mr. Coulson remarks, in his work "On Diseases of the Bladder," "It is certain that uric acid gravel is very frequent in children under some circumstances; and it is known that calculi have been found in the bladder even at the time of birth." He, however, does not mention any specific instances in any of his writings. But that stone is found to exist in the bladder of the newly-born infant, *cæfteris paribus*, we think few will be inclined to deny at the present day, although there are so few published instances.

At Guy's Hospital, on the 10th instant, Mr. Cooper Foster cut two children for stone in the bladder; one of these was a little boy, two years and a half old, from whose bladder he removed a small, flat calculus, the size of a French bean; the other was a male child, four years and a half old, with distinct symptoms of calculus, clearly traceble to the period of his birth. The stone removed from the latter was pretty large, being fully the size of a pigeon's egg, and no doubt had taken a long time to form. From what was stated by Mr. Foster, we are disposed to believe with him, that a small stone was present in this child's bladder at birth, and this accounted for the irritability of the bladder, and acid urine at that time, which has continued uninterrupted to the present time.

At the Royal Infirmary for Sick Children, during the last year, Mr. Foster performed lithotomy on seven young children; in one of these, a child five years old, he could distinctly trace the symptoms of stone from birth, and he believes it quite probable that the stone may have existed before birth, as in the child four years and a half old just operated upon.

EXCISION OF TWO KNEE-JOINTS.

As the operation of excision of the knee-joint has to some extent replaced amputation of the thigh, we have not thought it necessary to report all the cases in which this operation is now performed. At King's College Hospital it is stated that amputation has become a rare proceding, excision of the joints being preferred to removal of the limbs. On the 14th instant we saw two knees and one hip-joint excised by Mr. Fergusson. The first of the knee cases was the right joint of a young man who had suffered from disease of this articulation for the last four or five years.—The symptoms were not very acute in the earlier stages; but within the last twelve months the pain had been extreme, and the sufferings of the patient were so severe that he was induced to seek relief. It did not appear to Mr. Furgusson at first to be an urgent case, but subsequently the pain in the joint increased, and considerable effusion took place into the articulation, which indicated severe inflamation. Acute œdema of the leg also occurred. A few days before the operation he had made a puncture into the joint without any good effect. Excision was therefore resorted to, and a slice of the tibia and condyles of the femur removed. The patella was at the same time taken away. The disease was found to be even greater than there was any external indication of, but was limited to the surfaces of the femur and tibia, slightly affecting the patella; in all probability it had at first commenced in the synovial membrane, and thence spread to the cartilages. In these cases Mr. Fergusson now considers it best to take away the patella, as he does not believe that the retention of that bone adds strength to the joint, and the cure in many cases has perhaps been more protracted from its having been left, as was particularly illustrated in a case lately under our observation, in which when that bone was subsequently removed the cure became very rapid.—The limb was carefully adjusted in a splint before removal of the patient to the wards, the flaps of the wound having been first brought together by means of silver-wire sutures.

The second was that of a little boy whose knee-joint was much enlarged, associated with disease of the synovial membrane and articular cartilages, which had existed uninterruptedly since his birth; having undergone various methods of treatment, with no good result. A modification of the usual operation was adopted in this case, the diseased surfaces of the joint, together with the affected patella, being removed through the opening formed by a single line of incision right across the joint, thus avoiding an H incision, as in the first case. Rather more of the femur was taken away in this instance. There were the remains of an abscess in the upper part of the tibia, which had pointed into the calf of the leg. Silver-wire sutures were also applied in this case to bring the lips of the wound together, and the limb was placed upon a splint.

On enquiry, we learn that both cases are going on favorably.

EXCISION OF THE HIP-JOINT.

A LITTLE boy was admitted into King's College Hospital with extensive and old-standing disease of his left hip-joint, with the remains of numerous old sinuses and abscesses which had apparently healed, leaving several cicatrices which had become blended into one very large one. The disease had been existing between three and four years, and he was seen by Mr. Fergusson about ten months ago, at which time he recommended resection of the joint, but the parents would not consent. The child's health, however, got very bad, his joint was quite stiff, the knee drawn up, and his condition very precarious, and his parents therefore consented to the operation, which was performed under the influence of chloroform, on the 14th inst., on the same occasion as the two knee-joints already described. The parts around the joint were found to be very rigid; the head of the bone was in the natural position, but the greater part of it was absorbed, the remains resting upon the cotyloid cavity, which had become filled with new material, and had no evidence of disease affecting it. The lips of the wound, which consisted of a single longitudinal incision, were brought together with silver-wire sutures, and the leg and thigh placed in an interrupted splint. The little patient has been doing well since the operation, and will probably recover with a useful limb. It is possible, in such a case as this, that the patient might have completely recovered without resection, but it would have been with a permanently stiff joint, and after a long course of illness.

EXCISION OF THE ELBOW.

ONE of the most typical cases of disease of the elbow for the judicious employment of resection presented itself to notice lately at Guy's Hospital. The left elbow of a lad between sixteen and seventeen years of age had become swollen by the infiltration of the tissues with that gelatinous substance so commonly met with in certain diseased joints, causing it to resemble in shape a small leg of mutton. This appearance is, however, more indicative of strumous disease. The disease here had commenced about eighteen months ago, and had involved the cartilages and synovial membrane, extending in two or three places to the osseous structures, especially in one part of the shaft of the ulna, which was found to contain, during the performance of resection by Mr. Birkett, on the 17th of August, a small cavity filled with strumous deposit. There were three openings in the vicinity of the joint—one above, one to the inner side, and one to the outer side, the last being upwards of an inch in diameter. Excision was performed by means of a single longitudinal incision, which is now found very much to facilitate the process of healing. The quantity of plastic matter around the joint was very great, extending even within the articulation. Mr. Birkett removed the ends of all the affected bones, taking away a second piece of the ulna, and the flaps were well brought together by means of strips of wet lint. Not a vessel required ligature, and we learn that up to the present moment the lad is doing well.

Of all the joints, the elbow is perhaps the most frequently submitted to resection, and, as a rule, is followed by success, which is very gratifying to the surgeon. Good motion is usually obtained if a sufficiency of the joint is taken away.

RUPTURE OF THE TENDO-ACHILLIS; SUBSEQUENT RE-UNION.

THE facility with which union occurs after a tendon has been divided subcutaneously—we will say the tendo-Achillis, for example—would lead to the impression, that an equally favourable, but, perhaps not so speedy a re-union, will occur when such a tendon is forcibly ruptured by muscular contraction, as in the case we briefly give below. The laceration of a tendon from such a cause as this, must necessarily be attended with some amount of irritation and pain, for the force producing it must be exceedingly powerful, when we reflect that in the knee, during sudden contraction sometimes of the quadriceps extensor muscle, the patella will become fractured in place of the tendon rupturing. This very well shows the strength and resistance which exist in large tendons. In the patient who was the sufferer by this rare accident, the union in the course of several weeks became perfect, but with some weakness remaining.

J. M——, aged forty-eight, a coal-porter, was admitted under Mr. Weeden Cooke's care at the Royal Free Hospital. A week previous to admission, the patient, who is a pale, sallow man, stepped on a bit of coal, and twisted his foot, but did not fall. He immediately experienced a stinging pain at the heel, but did not feel any snap, or giving way of the tendon. It was looked upon as a sprain, and he rubbed it with oil. The pain and inability to use the limb increasing, he applied to a surgeon in the neighbourhood, who sent him to Mr. Cooke, a week after the accident, when it was at once apparent that there was a solution of continuity of the tendo-Achillis an inch above its insertion into the os calcis, with considerable loss of power in the limb. although he was still able to hobble along. In general health the patient was not strong, and somewhat exsanguineous. Mr. Cooke ordered the application of a slipper, with a strap attached to the heel part, the latter to be carried up, and fixed around the thigh just above the knee, thus keeping the leg in a flexed condition, with the foot extended, and so preserving the divided ends of the tendon in apposition. The general health was attended to: bark and acid and generous diet were administered, and the union of the tendon went on satisfactorily, though slowly, for four weeks, when, upon examination, a good deposit of substance uniting the two portions of tendon was observed. The removal of the slipper and belt was now permitted, and the patient had leave to use gentle exercise about the ward. He was ordered to continue the bark and acid, as well as the meat and stout. Discharged at the end of the sixth week, and was able to walk comfortably, with the aid of a stick. The exsanguineous appearance has given place to a more healthy aspect, but there is still a fatty degeneration hue. This patient subsequently came to show himself with a much more ruddy aspect, and was able to walk as well as ever.

LOSS OF AN EAR, AND OTHER INJURIES CAUSED BY THE FALL OF SOME CHALK CLIFF.

The most fearful injuries are sometimes the consequence of the falling of large masses of earth, or embankments of any kind, upon individuals, and if complete submergence occurs, death generally ensues. At Gray's, in Essex, there is an exposure of the chalk, near the river side, which forms an embankment, but not of a very great height. On the 18th of June, several workmen were employed near the foot of this embankment, when between twenty and thirty tons of chalk suddenly fell. One of the labourers, a man aged twenty-five years, was partly embedded in the ruins, but was very shortly afterwards rescued by his uninjured fellow-workmen. This was at six o'clock in the morning. He was immediately brought up to town, and conveyed to Guy's Hospital, where he was placed in Luke ward, under Mr. Hilton's care. His right ear was lost, the concha having been completely knocked off by a mass of chalk, as evenly as if severed by a sabre. His right leg and knee were quite crushed, and he was much scratched and bruised. It was found necessary to perform amputation through the lower third of the thigh the same day, which was done by Mr. Hilton. At the time of the injury, the poor man was senseless and stunned, but afterwards completely recovered his consciousness. His left eye was cut; his spine was injured; and with the compound fracture of his leg, and the loss of his ear, his sufferings were very acute. From all these he has perfectly recovered: the various wounds have healed up; his stump is healthy and firm; the cicatrix around the meatus auditorius looks tender and sore, but his hearing is unimpaired, he states, in the least degree, being as acute on the injured as on the healthy side. He got up for the first time on the 1st of August, and when last we saw him, on the 3rd, he was quite convalescent.

We refer to this interesting case in our Records, principally on account of the ear being lost and the hearing remaining quite perfect. There can be no doubt that this function is sometimes much impaired by the loss of this organ, and that the auricle is an essential feature towards comfortable hearing we think very few will deny. Had the patient's ear been immediately discovered and properly applied by sutures, there is a reasonable probability that it might have been saved to him and disfigurement avoided. A case of this kind is mentioned by Mr. Harvey, in his work on the Ear: he was called hastily on one occasion, to a girl, who, in a fit of epilepsy, had fallen with her head on the edge of a scraper, by which the left auricle was nearly severed from the head, hanging only by a small piece of undivided integument. It had been in this state for some hours. It was replaced by means of interrupted sutures, secured by strips of plaster, and ultimately united without the slightest deformity, other than a temporary narrowing of the meatus. Such results encourage the surgeon to make every attempt to save an ear. Sometimes, if an ear is amputated by any sharp instrument, by prompt surgical management, its re-union may be established.

PREPUTIAL CANCER.

The interest attached to the removal of penile and preputial cancers essentially centres in their future history. If the disease is strictly local, and does not implicate any of the inguinal glands, the experience of our hospitals points to an immunity for at least a number of years. On the other hand, when the glands of the groin are affected, the disease is most certain to spread, within a brief period, from already affected glands into the interior of the body and so destroy life. Very few surgeons would venture to remove cancer of the male organ, with inguinal glandular disease, unless to afford temporary relief to perhaps very great suffering. Curiously enough, the wound from the operation will heal up. On the 31st of July, a man, aged fifty, with epithelial cancer of the prepuce, and unaffected groins, was submitted to operation by Dr. Marsden, at the Cancer Hospital. The patient was married. Two years ago, a small wart appeared on the cutaneous surface of the prepuce, which gradually increased in size until it involved the entire prepuce, together with a small portion of the upper part of the corona glandis. The general surface was ulcerated, and partook of the usual character of epithelioma. The poor man was extremely anxious for its removal, which was effected by Dr. Marsden without the use of chloroform. Perhaps there is no part of the body more sensitive to the influence of surgical measures than that under consideration; but the patient preferred not to take the chloroform, and bore the operation very well. There was little or no bleeding, and the diseased parts only were removed. The patient has since gone on well, and the wound is healing up. He seems healthy, and there exists no hereditary tendency, so far as can be ascertained.

TEMPORAL ATHEROMATOUS TUMOR.

The scalp and face are very commonly affected with sebaceous and atheromatous growths. We have noticed in our "Clincial Records" the appearance of these tumours in almost every conceivable situation on both. On the 29th of July, a young man at the London Hospital was brought into the operating-theatre with a tumour as large as a good-sized walnut, situated on the right temple, which was removed by Mr. Luke. It proved to be a cyst containing atheromatus matter, and was firmly bound to the outer edge of the orbit, requiring some patient dissection at that part.—Chloroform was not used, but so sensitive were the structures in that situation that the patient suffered much pain. The wound has healed up, and the patient has now left the hospital quite well.

OMENTAL TUMOUR OF THE GROIN EXISTING EIGHTEEN YEARS.

A case of peculiar interest was brought into the operating theatre of King's College Hospital on the 17th July; a man with a tumour in his left groin, which had existed for eighteen years. He had been originally affected with a femoral hernia, and had worn a capped truss during the whole of the period mentioned; great annoyance and inconvenience was experienced from its size and situation, it being now as large as a small fœtal head. He had not suffered from the symptoms of hernia at any time, except at an early period, when it was supposed to be that affection. At last he became desirous of getting cured, and was sent up to town by Mr. Bradley of Greenwich, under whose care he had been for some time. On examination the tumour did not seem to increase or diminish in size; but from the history it was learned that it had grown rapidly within the last nine months. Mr. Fergusson thought it a fatty tumour, and possibly omentum, and that the communication between the hernia and the sac had become obliterated. Whether an enlargement of omentum or a fatty tumour, it was resolved to remove it. Chloroform was administered by Mr. W. P. Swain, and the process of removal was commenced, when the mass of the tumour was discovered to be a series of flattened folds of omentum, much loaded with fat. There was no mistake about the nature of the case. The sac was opened, and on the finger being passed to the crural ring it was found to be open. The sac could not be pushed up; its original shape had changed, having become flatter; and it was dealt with by applying strong threads to the narrow portion near the ring, and then cut away. There was some amount of risk in this operation, as was observed by Mr. Furgusson; but as the peritoneum was not exposed, it is to be hoped the wound will not only close, but that the crural aperture may become completely blocked up. The detached mass of omentum weighed between thirteen and fourteen ounces.

On a subsequent visit to the hospital we found this patient going on well, the parts were healing kindly, and there was no doubt that he would shortly leave, cured of his tumour.

SCROFULOUS DISEASE OF THE THUMB AND LOWER JAW.

A pale, delicate looking boy was admitted into the Royal Free Hospital, with the right side of his face much swollen, and a fistulous opening over the ramus of the jaw, which was evidently in a necrosed condition from strumous disease.—His right thumb was also disorganized from the same cause, and was quite useless. This was amputated by Mr. Alexander Marsden. Interference with the jaw-bone was deferred till union of the flaps of the thumb had ensued. This readily occurred in a few days, and on the 12th of July he was again given chloroform, and an incision was made along the right border of the lower jaw, and the affected portion laid bare. The ramus was found to be in a state of necrosis, and had a very offensive odour. With a pair of forceps all this was removed, as it implicated the entire circumference of the bone at the centre of the ramus, and left a communication between the mouth and external wound. The latter was stuffed with lint, and in the course of a few days healthy suppuration ensued. The boy's general health is becoming improved; there is still much discharge from the wound, and the cure is an affair of time. We have no doubt whatever that the space between the two portions of jaw-bone will eventually become filled with a fibrous substance, as has happened in similar instances.

We have lately witnessed several operations about the jaw, which have been attended with good results. One of them was for necrosis of the ascending ramus, in a boy under Mr. Thompson's care, at University College Hospital, wherein he removed a distinct sequestrum, and the patient did very well. On the 14th of July, Mr. Erichsen, at the same hospital, gouged away some necrosed and carious bone from the face of a lad. The part affected was the malar bone, an unusual seat for necrosis, which in this case ensued from a blow. A small fistulous opening existed over it, and there was much swelling. On the 3rd of July we saw Mr. Paget treat a cyst, situated in the body and ramus of the lower jaw of a woman aged about thirty-five, in St, Bartholomew's Hospital. He let out a serous fluid, and touched the interior with caustic. He had removed a cyst from the same situation a year and a half before.

THE PREVALENCE OF STONE IN THE BLADDER.

On the 27th of July, Mr. Cooper Foster, at Guy's Hospital, removed a calculus the size of a horse-bean from the bladder of a child of five years. The operation was performed in about twenty-five seconds. Afterwards Mr. Bryant submitted to lithotomy a lad fifteen years of age, a sufferer from stone for some time, from whom was removed a stone much larger than a pigeon's egg, composed of the phosphates. The suffering of this patient, however, did not seem at all commensurate with the size of the calculus. These two patients are doing well. Four cases lately submitted to lithotomy, and one to lithotrity, at the London Hospital, are all turning out well.—As a remarkable evidence of the sanitary state of our hospitals, we have not a single fatal case of lithotomy to record.

WOUND OF THE HAND FROM A RUSTY NAIL.

Wounds of the palms of the hands and soles of the feet generally cause anxiety to the surgeon, from the great risk of tetanus setting in. We have noticed many cases of the kind in which the slightest scratch from a rusty nail on the foot, or perhaps the palmar aspect of the thumb, has ended fatally from this disease; yet there are many instances in which such an untoward event does not ensue.

On the 28th July, a lad of eighteen years was brought into the theatre of University College Hospital to get the remains of a rusty nail extracted from the back of his hand, which had entered it a year ago. He had been free from any inconvenience until lately, when a constant and severe pain ensued over the middle metacarpal bone at the back of the hand, with much tenderness in one spot. The hand had become partially flexed since the injury, and was just now quite useless. Nothing like a nail could be felt through the skin; but Mr. Erichsen thought it prudent to make an exploratory incision, and if the nail were present to remove it. This was done, but the nail was not there. The periosteum covering the metacapal bone in this situation was divided, and if the pain depended upon any inflammation of that membrane, this proceeding would afford relief. Chloroform was not used in this trifling operation.—Subsequently to this the pain disappeared, and the wound was healing by suppuration. At the time of the operation, the flexed fingers were forcibly straightened, and the hand placed upon a splint. Passive motion will be employed, and a useful hand will probably be obtained.

CONSTIPATION FOR THREE MONTHS COMPLETELY REMOVED.

A boy aged eleven years, from Essex, was admitted into the Royal Free Hospital, on the 12th for obstinate constipation, which had existed for three months, without a single motion. His abdomen was enormously swollen, quite solid almost throughout, from the packing of the bowels, and measured forty-three inches in circumference.—There were many symptoms present, solely due to the interference in the natural circulation through such an important channel as the alimentary canal. Dr. Brinton prescribed an enema, which could not be introduced, as the rectum to the verge of the anus itself was absolutely packed with matter. This was got rid of by means of scraping it away, and when this part of the bowel was pretty well cleared, the size of the abdomen was reduced to thirty-nine inches and a half, when enemata began to act. The most useful and efficacious enema now was croton oil, castor oil, turpentine and gruel. This was given every few days until the alimentary canal was perfectly cleared, removing an enormous quantity of scybalæ and hard fæces; and the abdomen measured on the 19th of July, the day of his discharge, but twenty-eight inches, its natural size.

This boy had had other enemata previous to that containing croton oil, and although they acted slightly when once the rectum was emptied, still the croton oil appeared to be the most efficacious. He was taking inwardly at the same time, at first colocynth and aloes, and latterly compound rhubarb pill every night, the bowels being relieved daily for the last month.

Constipation was an habitual thing with him, from a general torpidity of his alimentary canal, and he did not seem to have any hepatic sluggishness. He took but a small quantity of medicine by the mouth until latterly, and the case illustrates very well the value of proper enemata, judiciously administered. When the boy first came into the hospital, and lay on his bed, the prominence of the abdomen was so great that he could not see his feet. He passed a great deal of urine during his constipation, and his appetite was excellent. When he left the hospital the abdomen was supported with buckle bands. We may remark, that when first admitted he was galvanized over the abdomen, but that proved of no service of itself till the enemata began to act.

UNUNITED FRACTURE TREATED BY DRILLING AND SETON.

An ununited fracture situated in the thigh is a very serious calamity, more particularly if it has become chronic, and has resisted the means attempted to afford relief. There are cases of this condition of fracture which never unite or derive any benefit from whatever treatment may be adopted. Thus to refer to the cases collected by Dr. Norris, 38 in number, in which the ends of the bones were either scraped or resected, 24 were cured, 7 derived no benefit, and 6 died. This shows that one-third of the cases treated are failures. The object in the treatment of this surgical deformity is to excite such an amount of inflammatory action as will lead to the throwing out a quantity of lymph, which will either knit the ends of the bones together by osseous transformation, or absorb the false joint, if it be present, and so convert the case into a recent compound fracture.

A case that came under observation on the 10th ult. at King's College Hospital was one in an elderly seaman, who fractured his left thigh on board ship at sea. It united in a bad position, and broke again on his coming ashore, and from too much motion it remained ununited at its lower fourth.—The man was a pitiable object with such a useless leg, and became a patient in this hospital. A month ago Mr. Furgusson made a number of incisions in the membrane over the ends of the bones subcutaneously, as recommended by Professor Miller, of Edinburgh, but without the least good result. Accordingly, while he was under the influence of chloroform, the end of the upper fragment was exposed and sawn off, and a number of holes were drilled in this end of the bone, but these were not filled with pegs. The end of the lower fragment was immediately over the femoral vessels in this part of their course, and, as it was pretty firmly bound in its present situation, it was thought desirable not to interfere with it.—Finally, in addition to what was done, a seton was passed through the anterior wound, and brought out at the outer part of the thigh. Thus were adopted not less than three most efficient measures to bring about the necessary amount of inflammation, although we recollect a case very well of a strong healthy hospital patient, who had an ununited fracture of the middle of his thigh treated by a seton simply, and so great was the amount of inflammation set up that delirium ensued, and death occurred in a few days. But this is by no means an invariable result. We shall give the result of this case at a future period.

DOUBLE HYDROCELE EXISTING FOR TWELVE YEARS.

Hydrocele is an affection seen almost daily amongst the out-patients of the different hospitals, and is frequently tapped and then injected, and often thus radically cured. The dropsy of both tunicæ vaginales is not so frequent as that of one only. Mr. Hilton, at Guy's Hospital, had lately a case under treatment, in which a double hydrocele had been present for twelve years in a man forty-nine years of age. One of them was tapped and injected ten years ago by Mr. Hilton, but a radical cure did not follow. Three years ago both were tapped by Mr. Cock, but not injected, and he remained easy for some time. They both refilled after a time, and on the 28th of June Mr. Hilton tapped the right one, and injected some of the compound tincture of iodine, which was followed by some of the desired inflammation. This continued up to the period of his departure from the hospital on the 13th of July, and no doubt, as Mr. Hilton observed, a radical cure will be effected. The other testicle was tapped before he went out, but not injected.

Hydrocele is generally single, but the statistics vary as to which is the most common side, the left or the right. The left has been believed to be the general seat, but in Mr. Curling's experience the greater number was on the right. In a few cases registered by him, and mentioned in his work "On Diseases of the Testis," he found six double hydroceles in 115 simple cases. He has even met with the double form in infants. In a table of 1000 cases, treated in the Native Hospital, Calcutta, and quoted in his book, 305 were of the right, 325 of the left, and 370 of both testicles; thus showing, at least amongst the Native East Indians, that about one-third of the cases are double hydroceles.

CANCER OF THE ARM AND HAND.

All observers of the special diseases to which the human frame is liable must have been occasionally struck at the unusual seats in which they sometimes present themselves. In the female sex cancer is generally met with in the breast and uterus; in males, the testes are perhaps the most common parts attacked, although it is met with in various parts of the body: this is not the case in women. However, exception to this rule now and then occurs; for we lately noticed a woman, eighty years of age, at the Cancer Hospital, with a distinct cancerous ulcer situated on the back of her left arm, extending towards the dorsum of her hand, which, with the wrist, seemed to be in a state of considerable irritation. The disease commenced about thirteen months ago as a flat tumour, which ulcerated, had discharged an offensive matter, the edges being irregular, jagged, and elevated. Her general health was very bad, and she had the malignant cachexia. Dr. Marsden ordered tonic and strengthening remedies with pretty good effect, and locally an ointment consisting of the iodide of lead, under which the sore is assuming a more healthy aspect, although it is not healing; and she is not suffering to the extent she was at first. The disease has become to some extent stationary. As we have had occasion to remark on previous occasions, the lead exerts a sedative influence on these malignant diseases of a peculiarly beneficial character.

On the 6th ult. a man presented himself at the same hospital with an ulcer at the back of the hand, of twelve months' duration; it was unmistakably malignant and very foul. He was ordered, by Mr. Weeden Cooke, carrot poultices for the present, and bark and acid internally, as well as good diet. He is a much younger patient than the last, and there is a probability of getting this sore to heal.

In the museum of the hospital there is a specimen of extensive cancerous ulcer affecting the forearm of a woman, which was so bad as to require amputation.

REMOVAL OF TWO CARCINOMATOUS BREASTS.

Two examples of well-marked carcinoma of the mammary gland were removed by Dr. Marsden, at the Cancer Hospital, on the 1st inst. In the first of these the disease had occurred in a woman aged forty-three. It occupied the left mamma, was of moderate size, and being uncomplicated with enlarged axillary glands, adhesions to the deeper parts, &c., it was thought a favourable case for removal by the knife. The patient declined the use of chloroform, and did not utter a cry during the operation. As the integuments were quite healthy, a very small portion only of them was removed. The nipple was, however, removed, although apparently quite healthy. Two small arteries required to be secured. On making a section of the amputated part, it proved to be a scirrhous tumour, of the kind which M. Velpeau has called hard and lardaceous, and of which he has given in his work a very beautiful coloured engraving,* (fig. 2. pl. 1.) No part of the tumour had undergone softening.

In the second case the patient was a woman aged forty-five. Chloroform having been administered, Dr. Marsden proceeded to remove the tumour, leaving the nipple. A very small part of the skin required to be taken away along with the tumour, and thus, as in the preceding case, the incised surfaces were readily brought together and secured, in the usual way, by means of stitches, adhesive plaster, and a bandage. No arteries required to be tied, and this might be owing to the partial use of the écraseur; but some bleeding occurred during the night. On a section being made of the amputated part, it was found to be a true scirrhus of the mamma, in a more advanced stage of development than the preceding. Softening had taken place in several parts of the cancer, and small deposits of a red ichorous fluid and pus of an unhealthy appearance had already formed. The disease was evidently making progress towards the surface, and might soon have become an open cancer. The appearances presented by a section of the tumour will be found exceedingly well represented in Pl. 3 of the work already referred to.

MENSTRUATION DURING PREGNANCY.

THAT a discharge, more or less identical with the ordinary catamenial flow may occur during pregnancy, is admitted by the majority of experienced observers. The following case, under the care of Dr. Graily Hewitt, is an interesting example of this kind:—

Mary B——, aged twenty-five, presented herself at the Samaritan Free Hospital in April last. She had been married for six years. The catamenia commenced at the age of twelve, and at first appeared every two months. After a suppression which lasted for six months, the discharge became regular at the age of fourteen, and continued so until after her marriage, the ordinary interval being a calendar month. She became pregnant for the first time rather less than six years ago, and was delivered of a healthy child, now alive. During this first pregnancy, however, it is stated that every fourteen days a bloody discharge occurred, lasting three or four days, and this periodic discharge persisted during the *whole period of gestation.* The discharge was rather paler than that observed before she became pregnant. The child was suckled for six months, and during lactation no trace of bloody discharge was noticed. A second pregnancy, attended with precisely the same phenomena, terminated favourably three years ago. The second child, also now alive, was suckled for fifteen months, and the catamenial discharge was absent in this second instance also during lactation. The catamenial discharge is habitually rather excessive in quantity, continuing usually six to seven days; it occasionally extends over twelve or thirteen, and this has been the case since she was married only.

There appeared no reason for disbelieving the facts of the case, as above-stated, and as it was important to substantiate them as far as possible, further inquiries were made, the result of which confirmed the truth of the patient's account. From the birth of the second child up to seven months ago, she continued regular; after that time, symptoms of pregnancy were again observed —viz., morning sickness, pain in the legs and back, resembling those which occurred in her former pregnancies; but the catamenial discharge at the same time became irregular, the irregularity consisting, as in the former two instances, in its taking place about every fortnight. This latter circumstance, indeed, as she herself observed, was one which, from her former experience, led her to consider herself again pregnant. Four months ago the abdomen became swollen, and the breasts much enlarged and painful. Three weeks later, while walking in the street, she slipped upon a piece of orange-peel; and twelve hours afterwards, pains, like those of labour, supervened, and a fleshy substance was expelled from the vagina. From an examination of these and other facts related, it is evident that abortion then took place. The abdomen immediately diminished in size, and has remained very small ever since.

The case is one of very considerable interest

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* The coloured and highly-finished engravings, forming so important a part of M. Velpeau's work, are included in Dr. Marsden's translation. In the translation of the same work published by the late Sydenham Society, the engravings are omitted.

Here, in fact, was an instance of the kind referred to by Desormeaux (quoted by Dr. Montgomery), "in which the appearance of the menses in small quantities, and at an unusual time, was almost a certain sign of conception." So, indeed, the patient, in the case just related, considered it to be. The same series of phenomena were observed, let it be observed, on *three* successive occasions.

The patient now sought relief for pelvic pain and menorrhagia, depending, as Dr. Graily Hewitt was led to believe, on excessive uterine engorgement, and deficient involution of that organ after the abortion. No other morbid condition was detected on examination.

Medical Annotations.

"Ne quid nimis."

CHLOROFORM IN DENTISTRY.

There is an impression abroad amongst dentists that every man is his own keeper, and that his life is in his own hands. Lamartine says that it is strongly characteristic of the weakness and imperfection of humanity, and typical of our earthly nature, that man comes into the world impotent to save himself, or to add one day to his life when beneath the edge of the mortal shears, destitute and helpless, but armed with the power of annihilation and self-destruction. This privilege the dentists of some sort are disposed to grant freely to their dupes. Chloroform is undoubtedly a mortal agent, an agent which may become inimical to life. Its risks have but too frequently and too fatally been shown by many recent accidents, and especially by the unhappy death at Epsom on the 27th ult., of a person, to whom it was administered by a druggist. There is a moral as well as an intellectual side to our art, and to the art of the true dentist. It is time that the ethics of chloroformization were established. The extraction of a tooth is not an operation which in any way bears upon life; it is not in itself attended with any risk. The deaths which chloroform has occasioned, when administered to facilitate this process, are unbalanced by any corresponding gain of equal import. The moral duty of the dentist is therefore clear. He has not the right to risk the patient's life for the extraction of teeth. The timidity of the patient or her pressing entreaties are not more germane to this consideration of duty than her rank or her wealth would be. In the cause of life everything is permissible. It is justifiable to refute the arguments of her ladyship; it is right to give a flat denial to her grace. However crooked those cruel fangs, they are less pitiless than the fangs of death; and though the patient turns rebellious from the door, it is better than that she should have found there "that bourne whence no traveller returns." It is chiefly our fashionable ladies who demand chloroform. This time it was a servant girl who was sacrificed; the next time it may be a duchess. If a patient should press urgently for any dangerous poison it would not be administered to her, notwithstanding her own personal responsibility. Nor should chloroform, although only probably dangerous to life. Henceforward we think that this must be looked upon as a matter of conscience amongst operators. To our thinking they are bound tó withhold chloroform for the extraction of teeth by every consideration of right and moral responsibility.

THE QUACK-VALIANT.

It is but rarely that the quack comes forward to do battle for himself. However he may court publicity for his nostrum, he is commonly content to shroud his individuality in friendly shade, and to withdraw, if possible, into yet thicker darkness when his practices are assailed. Not so James Cauty Smith, of Thorne, Yorkshire, unitarian minister and homœopath. Charged in our columns by a surgeon of the town with practising for gain, and with having purchased a German degree with a view of deceiving the public, Mr. Smith writes to us to protect him, not on the ground that the charge is untrue, but apparently because he considers such a practice justifiable, if the name and pretexts of his conduct be somewhat softened in their description. "Having attained some considerable medical knowledge in his youth, he has been in the habit of rendering that knowledge useful to the poor of the neighbourhood, and personal friends belonging chiefly, but not exclusively, to his own congregation." In return, "he accepts a present from some of his friends who press it upon him." The degree which he sports was conferred for "literary excellence;" and as "he does not profess to practise medicine, he cannot conceive what business it can be of our correspondent, or of anyone else." Surely this is the very acme of presumption and shortsightedness! There are constituted authorities who are especially entrusted with the power, as they possess the fitness, to judge what opportunities are really sufficient to afford medical knowledge, and what amount of knowledge justifies an authorization to practise medicine—or, in other words, to undertake the responsibility of dealing with a matter of life and death. What does it serve the poor creatures who fall into his hands that Mr. Smith "does not profess to practise medicine," since he confesses that he practises it without such profession? If there be within the spiritual domain of Mr. Smith any Sunday resorts of unhallowed amusement to which the proprietor does not profess to admit the public by payment, but allows them to enter if they wish, and consents to accept sixpence in return for a refreshment ticket if they press it upon him, he probably puts a slight value upon professions which are so annulled by practice. This would afford, however, a very close parallel to the course which this letter describes. How does Mr. Smith define the line at which his homœopathic services ceasing to be useless may become dangerous; and, in cases where, as he writes, he thinks it necessary at length to call in the aid of an efficient medical man, how can he reconcile to his conscience the dangerous delay which his ministrations may have caused?

THE SOLDIERS AND THE SERPENTINE.

The filthy state of the Serpentine has for years been so palpable a source of disgust and fear, that only the passive inertia of official do-nothingism has prevented it from being cleansed, at a considerable but very necessary cost. It has been so choked with slimy mud, befouled with sewage, and thickened with decaying animal and vegetable matters in various stages of offensive decomposition, that it has long been pronounced unfit to bathe in, and, by its exhalations, dangerous to health. It may hardly seem credible that during all this time, and until very recently, the magnificent men and horses of the Household Cavalry were condemned to drink these foul and nauseous waters when quartered at the Knightsbridge barracks. Sewage and mud, and dirt, and soapsuds notwithstanding, the men, women, and children in this barrack were confined to this as their sole supply of water. At last, when the heat of an unusually sultry autumn made the nuisance altogether intolerable, the men and the horses did their best to escape from it. The men borrowed their drinking water from neighbouring taverns; the horses drank at first but little, lost flesh, and finally refused to swallow the water at all. This brought a remedy; if the lives of the horses were to be saved, something must be done to improve the water-supply, and quickly. An officer of the Quartermaster-General's Department was sent down with unusual promptitude to examine the fluid which had been supplied as Serpentine water, and to report upon it. He caused the main tank to be opened, and when the cover was lifted he incautiously peeped over into the cistern. He staggered back half asphyxiated by the exhalations that he inspired. Upon his report, water such as living creatures could safely drink, was laid on from the main at Knightsbridge, by which every other human being in the vicinity was supplied. But the unhappy officer who had inhaled the miasmata of the tank died a few days subsequently from fever; and, says the historian of this strange episode, "the Life Guardsmen who tell the story declare that the seasoned veteran perished from his want of caution in smelling the water which they and their horses had been condemned to drink for years." It is well that this incident belongs to the history of the past; but the indignation which such a narrative must excite may serve to strengthen the hands of those who are now watching over the sanitary interests of the soldier, while it adds another to the list of evils to which the Serpentine has been permitted to give birth.

QUARANTINE.

The follies of quarantine have been somewhat prominently brought into notice by recent occurrences. The plague at Bengazi has spread alarm through the oriental shores. The old stringent regulations were pressed into service once more. Not only was quarantine imposed upon all ships coming from the infected port, but upon all that arrived from other places which were in communication with it. If this principle were fully carried out at Alexandria and the other oriental centres of commerce, its effect would be to destroy the commerce and interrupt the communications of one quarter of the globe with the other; for instance, Liverpool and London are invariably in communication with half-a-dozen infected towns. From Orleans steamers arrive bringing news of yellow fever; from Ferrol, from Jamaica, from Koona Mooria arrive barques that have sailed from regions heavy with fever, small-pox, and whatever else is contagious. On one ground or another London might at any or every moment be declared an infected port, and ships leaving it placed on their arrival in strict quarantine. The folly would be intolerable; but it was on similar grounds that the course of our Indian communications has been diverted, and that they narrowly escaped the risk of complete detention. Quarantine is utterly useless where filth abounds—where bad drainage, bad ventilation, and bad sanitary arrangements invite and aggravate epidemic disease; it is unnecessary where cleanliness, good drainage, fresh water, and pure air are allowed to sustain nature, and assist in warding off disease.

THE SURGEONS OF LUCKNOW.

History records no more consistent devotion and steady bravery than were shown by the surgeons of Lucknow. Their labours were incessant. Often for twenty-four consecutive hours they ministered to the sick: they walked daily and hourly amidst disease, contagion, and death; but they endured also peculiar perils with undaunted resolution. Everyone must remember the accounts we have given of days spent in active aid to the wounded, within range of the enemy's guns; covered with blood, half fainting with fatigue, and with bullets whistling past, they have encountered all the dangers of the field without sharing its excitement. One surgeon, Dr. Darby, was shot in the back while operating; another, Dr. Fayrer, defended his house with unflinching bravery. Every other officer mentioned in the famous despatch of Brigadier Inglis has been promoted: the military surgeons alone have been left without any public honour. We urged their claims long since; and we see with pleasure that they will be yet further pressed upon the government. The public sympathy will go with these brave men; and we trust they may yet be rewarded.

THE GRIEVANCES OF THE LUNATIC.

The world could never get on without discontented men. They give the onward impulse which sends it trundling down the groove of progress. Contented, easy, comfortable men are satisfied to leave things as they are; they are indisposed to move beyond old limits, or to change the settled order of events. A man with a grievance is commonly looked upon with an eye of doubt and displeasure; our first impulse is to get out of his way. But first impulses are rarely trustworthy; and this especially,—first, because it is cowardly, and then, because it is unjust to ourselves and to society.

The grievance of to-day is that of the lunatic. A series of complaints are put forth which cannot all be unfounded: many cries of injustice, many calls for help, are filling the public air. We cannot be insensible to them: help there must be, and justice. Gross and palpable wrong was done to Mrs. Turner; grievous injustice was inflicted on Mr. Leach. True, Mr. Metcalfe is to be deprived of his licence, and Mr. Leach will recover some pecuniary compensation for his unjust incarceration. But the system which could permit such injustice cannot be permitted to have a permanent existence in this country. Other like cases of injustice, and similar instances of maltreatment, may not have come to light. We do not for a moment entertain the belief that cruelties such as those permitted at Acomb House deform the practice of other private asylums. But there is nothing which can offer an assurance to us, or to anyone, that the most flagrant injustice is not commonly perpetrated in the incarceration of persons, accused of insanity by interested relatives, upon certificates too easily granted. There is great reason to fear that it may be so: a new instance has been announced by Mr. Charles Reade, whose clear good sense and powerful pen will ensure a full investigation of the claims of his client. The law cannot stand unaltered; yet any change is attended with difficulty. Two desiderata are to be fulfilled. Any legislative measure on this point must, in order to be satisfactory, associate the social interests of the lunatic with his medical interests and the safety of those around him, all of which require that there shall be as few impediments as possible to his early safe custody and treatment. It is perfectly intolerable that any defects should exist in the discipline of lunatic asylums, since they are placed under the immediate supervision of Commissioners, whose power is great, but not greater, apparently, than their difficulties. If they do not completely carry out their most responsible duties, remedies of one kind or another must be discovered, and will assuredly be applied.

AN EXECUTION IN THE HOUSE.

A THIEF unhung is a sorry sight for honest men; but we know no spectacle more painful than an execution in the house of a medical man. An eager zeal for physiological science has more than once betrayed anatomists into positions of painful dubeity; but we have never seen a more equivocal recital than that which has this week gone the round of the newspapers touching the proceedings of some American surgeons in the examination of a criminal who had been delivered into the hands of the hangman, and upon whom they subsequently performed what would appear to be little less than vivisection. The statement is extracted from the Boston Correspondence of the *New York Tribune*, which copies it *verbatim* from Dr. Henry G. Clark's report, read before the "Boston Society for Medical Improvement, and published in the *Boston Medical and Surgical Journal.*" The appetite for hoaxes is so strong in America that it might, perhaps, be hoped that some deception was practised in this instance; but the details are given with scientific truthfulness and accuracy. The man was allowed to hang twenty-five minutes. Half an hour later Dr. Ellis commenced the autopsy; and from his notes, and those of Mr. Tower, one of the pupils of the hospital, an account is given from which we extract the following paragraph:—

> "At half-past eleven, a slight but regular pulsatory movement was observed in the right subclavian vein. Upon applying the ear to the chest, this was ascertained to proceed from the heart itself, *which gave a distinct and regular single beat, with a slight impulse, eighty times a minute.* The chest was then opened, and the heart exposed, without in any way arresting the pulsatory movements. The right auricle was in full and regular motion, contracting and dilating with beautiful distinctiveness and energy. At twelve o'clock, the spinal cord having been previously divided, the number of contractions was forty per minute, having continued with only a short intermission regularly up to this time."

A long string of additional observations is recorded. Finally, in the discussion that ensued, Dr. Clark is reported to have expressed the "opinion that, as there was no lesion of any important organ, resuscitation might possibly have been accomplished by artificial respiration, &c., if efforts to that end had been made immediately upon the lowering of the body from the scaffold—that is, within half an hour after he fell." That opinion is amply justified by the details given. It amounts, however, to the most serious condemnation of the proceedings adopted. The man was not dead, but in a state of "suspended animation." How then characterize such a vivisection? Every man must shudder at the thought of what is implied, and we do not trust ourselves to speak out the deserved censure.

THE "PESTE BUBONICA."

PLAGUE of the virulent mediæval type has laid waste the states of Barbary. It broke out first amongst a tribe of Arabs near Bengazi. The English consul urged the Bey to resist its progress by a military cordon, which should stop all communication with the town: the Bey was too indolent to stir a finger. The disease spread rapidly through the city, and attacked whole families with mortal violence. One half of the inhabitants fled. Of those that remained, forty or fifty were daily dying when letters last left for this country. The cemeteries were overcrowded with putrefying bodies cast night and day into their shallow graves, whence they sent forth a terrible effluvium. The tolling of bells, the wailing of women, and the incessant howling of the men, gave a terrible character of desolation to this scene of oriental misery. Here, again, the people suffer for the sin of their rulers. Even in this place, drained, cleansed, and purified, instead of being left to fester as a very pit of filth, the plague had been impossible. But the whole soil is rotten with animal and vegetable *debris*—with sewage—with excreta—with the very pabulum of epidemic disease. The sanitary engineer and the scavenger would do that which no military cordon can effect. Plague is impossible in a well-drained and pure locality; and these deaths are voluntary sacrifices to filth.

THE RESUSCITATION OF THE DROWNED.

The grave responsibility attaching to the promulgation of any system of rules for the restoration of persons apparently drowned, as to the efficacy of which the slightest doubt could be entertained, has induced the Managing Committee of the National Life Boat Institution, who had hitherto circulated the old code of Instructions, so well known as those of the Royal Humane Society of London, through the medium of its life-boat stations on the coast of the United Kingdom, to solicit the opinions of medical men and medical authorities as to their experience and opinion on the Marshall Hall Method, with a view of framing a new code of Instructions, such as the Institution might with confidence circulate at its stations on our coasts.

In pursuance of this resolution, an appeal was at once made through these pages, asking for information, and similar appeals were made by letter to all the principal medical associations and hospitals in the United Kingdom, and to a large number of private practitioners, especially in neighbourhoods contiguous to the sea and to inland waters. Application was also made through some of the foreign embassies for the opinions of the chief medical authorities in foreign countries. These appeals, it is stated, were in general readily and promptly replied to, and the result is, that the Institution became possessed of a mass of valuable information and expression of opinion on this important subject, which justified them in causing a new code of Instructions to be printed, which is now being extensively circulated on the coasts of the United Kingdom, and is based entirely upon the recommendations of Dr. Marshall Hall. Of the 300 medical men and medical bodies who replied, it is found that, owing to the short time since its promulgation, only seven have tested the correctness of the Marshall Hall Method by actual experiment in cases of drowning, but that the greater number of twenty-two have done so in the case of asphyxiated or still-born children.

Referring to the opinions of foreign authorities, it appears that although Dr. Marshall Hall is known to them by his writings and his European celebrity as a physiologist, they do not seem to be acquainted with his admirable system for restoring drowned or other asphyxiated persons. They have, therefore, only pronounced theoretically on the subject: affirming the correctness of his manner of restoring respiration by postural action, so far as principle is concerned, but considering justly that it needed to be tested by experience. The Board of Public Health at Paris expressed its approval of the principles advocated by Dr. Marshall Hall, stating at the same time that the necessity for restoring respiration has been for a long time known and acted on by their medical authorities, although their mode of effecting it differed from that of Dr. Marshall Hall.

We heartily applaud the intelligence and public spirit of the Life-boat Institution in collecting thus widely the evidence of the singular efficacy of this mode of restoration. Of all the glorious titles to fame which Marshall Hall possessed, there was none more illustrious or more secure than this. His suggestion has already been the means of saving a large number of lives. Hundreds—ay, thousands—more will live to call him blessed. We cannot but express our deep regret that the managers of the Royal Human Society have not long ago adopted this series of regulations. When we first gave to the public the convincing demonstration of the truth of the theory of this proceeding under the hand of the author, and when testimonies of its singular value flocked in from all sides, we expected that this Society would forthwith have undertaken the revision of its rules, and the preparation of a new code founded upon the Marshall Hall Method. They have surrendered this glory to another society: they can never wear this laurel now. But, at least, they can still perform their plain duty. To continue to promulgate rules which, if not positively and directly mischievous, certainly are so indirectly, would be to betray the trust of their subscribers, and to fail in their sacred mission. This they most surely will not do; for, indeed, so to trifle with life were something worse than we care to designate.

VINDICIÆ MEDICÆ.

Art is long and difficult; life brief and stormy. It is a truism, but one which receives so sad an echo in the minds of a large proportion of our readers, that its antiquity does not bring with it the incident of dulness. The inherent difficulties of the art medical impose upon every conscientious practitioner many an anxious thought, and cost him not seldom moments of painful deliberation. But a thousand other material annoyances lie in wait for the surgeon, wrongfully to assail his peace, and mischievously to affect his reputation. The exactions, the impatience, and the injustice of some patients, the oppressive parsimony or bigotry of public boards, and unfortunately, too, the jealousy of rival practitioners, may add seriously to his difficulties. We do not fail to invoke the aid of public opinion in behalf of any who suffer injury from these causes, and many times have effectually interposed the ægis which we bear to protect the objects of these attacks. Lately we endeavoured to uphold the character of a young surgeon at Yeovil, who had been most groundlessly attacked by his brother practitioners of the same town. The whole question turned upon the possibility of smooth and solid union of fracture within a limited period. Mr. Garland had set the fracture well; six months afterwards, some other surgeons, examining it, had the presumption to contradict his oath, and to declare that there never had been fracture. The question never was open to doubt; we have received, however, a number of letters giving details of cases which establish the facts upon a solid pedestal of accumulated evidence Their pathological interest is not so great as to justify us in publishing them; but we thank the gentlemen who have been at the pains to forward them for their evident kindness and good feeling. Dr. Sydenham, who led the attack upon Mr. Garland, has forwarded to the local journals a series of remarks, in which he repeats his assertion, and by which he doubles the impropriety of his conduct. The verdict of the profession has been so decidedly announced that it is unnecessary to repeat the condemnation of the course he has taken. When La Fontaine was on his death-bed, he consoled himself under his anguish at the wickedness of his writings by the reflection that "after all they were very stupid." Dr. Sydenham may find the same consolation when he comes to regret the tone of his letter.

We have also had occasion lately to direct attention to the gross injustice of the Fordoun Board in dismissing Mr. Henderson, their medical officer, for making a very necessary autopsy. We see with great satisfaction that the Medical Chirurgical Society of Glasgow have petitioned the Home Secretary to enforce his reinstatement, and that a numerously-signed expression of sympathy has been forwarded to Mr. Henderson by his medical brethren in Scotland.

THE CHOICE OF LIFE OR DEATH.

What a fine beneficent thing is a foul stench. A most benevolent provision, indeed, which forewarns us of the approach of the deadly file of diseases ambushing in miasmata. Then do not let us kill the heralds of the hostile army, and persuade ourselves that, because there is no trumpeting, the enemy is not at hand. The stench is the foreguard of disease; our sense of smell the scout that gives us warning. If we strangle the spies, we deprive ourselves of the safeguard which Nature has given us. When we smell the ill savour of stagnant marsh, or rotting churchyard, or ruinous drain, it is a warning that fever is at hand. Common sense dictates the remedy. Cast out the enemy bodily; cleanse, drain, and purify. It is a question of pounds against lives. At this time of day that ought no longer to be an open question. It would seem to have been decided long ago. Monies well spent "manus avidas fugient hæredis;" lives lost are irreparable—

"Nos ubi decidimus
Quò pius Æneas, quò duces Tullus et Ancus,
Pulvis et umbra sumus.

Yet hundreds fall prematurely beneath the stroke of disease, whom money might have saved; thousands suffer from maladies susceptible of removal or amelioration by fitting hygienic precaution. A striking instance of a whole town suffering from pestilence, due clearly to the filth which deformed it, was related this week by Mr. William Rendell, health officer of St. George's, Southwark, in his description of Liskeard, in Cornwall. He says—"Here are gullies badly formed and full of solid filth steaming in the sun; here semi-solid refuse slowly runs down before the houses, and well-nigh all is evaporated and taints the air before it can reach the equivocal gully. The very prosperity of the place is against it; money is obtained, but health is sacrificed; the people are sadly over-crowded, and the doctors are from these causes powerless in the presence of disease they could otherwise most readily cure."

The Registrar-General's returns show a continual increase in the mortality in this district: during the quarter ending June, 1856, 146; 1857, 186; 1858, 248. But we do not need to take extreme cases, or resort for illustration to seats of especial abuse. The health of London has confessedly improved under a wise system of hygienic improvement, which has aimed at the removal of the causes of disease; yet the last quarterly summary of metropolitan sickness shows upwards of 29,000 cases of disease principally called into activity by local causes, and preventible or amelioriable in their nature. Evidently the work of the sanitary reformer is only commencing; the alphabet of his science is the dictum which we here strongly enunciate—that there be no tampering with the evidences of filth, but a total removal of it; no surface work; no mere superficial pretences of deodorizing and whitewashing, but that the work be done thoroughly and finally.

ALEXIS SOYER.

The dietetic art is second only to the art medical. Oftentimes food is medicine, still more often is medicine food. The loss of that great dietetic artist, Alexis Soyer, is to be deplored by all who are interested in the physical welfare of the masses, and more especially in the well-being of our soldiers and our sailors. His services in the Crimean war were of the highest value to the health of the army; more recently, since the inquiries of the Army Sanitary Commission have shown how greatly the health of the men suffered from defect of diet, the energies of Soyer have been most usefully devoted to the amelioration of their *cuisine*. His accomplishments as a culinary artist of the highest order have been so largely devoted to public purposes of general usefulness, that his premature death, by apoplexy, must be regretted as a public loss.

Reviews and Notices of Books.

Observations on Venereal Diseases, derived from Civil and Military Practice. By Hamilton Labatt, A.B., T.C.D., Fellow of the Royal College of Surgeons, Ireland, &c., &c. Pp. 283. Dublin: Fannin and Co.

There are several knotty points to unravel, and difficult problems to solve, in the pathology of venereal diseases; so that it must be considered as highly advantageous to the progress of science when surgeons apply themselves to observe these complaints under favourable circumstances. When such surgeons, then, endeavour to collect facts, proceed to classify them carefully, then compare them with those already known, and, thus armed, attack or strengthen the doctrines which have been proposed, they certainly confer great service on the profession and mankind in general. Knotty points and difficult problems will, during these labours, meet them at every turn; and they will naturally be tempted to throw some light where obscurity is still reigning. Such inquiries are expected of the rising generation of surgeons, who, nurtured in the wards and the dead-house, handling the microscope with ease, and fully acquainted with all the nice pathological distinctions of the day, are especially fitted to control the dicta of their elders.

With expectations of this kind, we read the "Observations on Venereal Diseases of Mr. Labatt, derived from Civil and Military Practice." It is especially the latter "*favourable circumstance*" which attracted our attention; for it is well known that no opportunity is to be compared to that of the military surgeon as regards venereal complaints.

We perused the book with considerable pleasure, as, from the numerous quotations and references, we found ourselves amongst esteemed authors, so well known and so often read, that they might be called old friends—such as Hunter, Carmichael, Bacot, Astley Cooper, Lawrence, Colles, Guthrie, Hennen, Rose, Abernethy, Ricord, Hey, Porter, Bell, &c. But though we are glad to meet them, we could not help thinking they mustered too strong, the "Observations" of Mr. Labatt himself thus making but a scanty appearance. We would have been more pleased to hear what the author had to say, than what our old friends have said; for their opinions, though extremely valuable, are sufficiently well known.

And here we can hardly refrain from alluding to a slightly-exaggerated manner in which the author uses the qualificatives when speaking of these authors. "Admirable works," "most eminent men," "great and distinguished surgeons," are so often repeated, and the most high-flown laudatory remarks so often indulged in, that our sober English good sense is frightened at the glare. No doubt these flights spring from good nature, but judgment should moderate such fits of rapture.

Amongst the original observations connected with the book, we would mention "the remarkable paucity of secondary syphilitic cases" in military practice. No instance of secondary syphilis occurred during the eight months Mr. Labatt had the charge of the depot of the 69th Rifles. And he adds that the total amount of admissions to the general hospital was 364, of which 340 included primary syphilis and gonorrhœa, and 24 *only* were cases of secondary syphilis. Nor were such cases, "generally speaking, either of a complicated or tedious character." Some of them are adduced, which prove this latter position; but in these cases we are sorry to see the *names* of the patients, as such should never be given in venereal complaints. The paucity above-mentioned is valuable, as showing the advantages of examinations and early and regular treatment.

Another important remark of the author refers to the excellent results of certain restrictions during the treatment. He says—

> "My full conviction is, that the solution is not to be found solely in the adoption of a careful and judicious course of mercury in the primary stages of the disease, or in the rejection altogether of its use, but also in those valuable restrictions under which the treatment ought to be conducted. ......In military hospitals, after due attention is paid to the condition of the skin, the patient is conducted to his ward, where perfect quietude in the recumbent posture is insisted on. His diet is arranged with the utmost precision and care, so as not to counteract but to assist the objects in view. All stimulants are prohibited in their earlier stages," &c., &c.—P 20.

We are of opinion that failures in private practice are often attributable to a disregard of these rules.

The author, as regards the classification of primary ulcers and secondary eruptions, has remained faithful to Mr. Carmichael's system, Mr. Labatt thus showing a certain amount of patriotism; but we should have been glad to see such adoption supported by the refutation of the objections which have again and again been brought against the ingenious views of Carmichael. We must not go backwards in medical science; or if the classifications of some surgeons are revived, good reason should be shown for doing so; and it is not sufficient to say, "with regard to the opinion which has been so ably sustained by Mr. Carmichael, that certain eruptions are naturally associated with particular forms of primary sores, there can be no doubt that the great majority of cases we witness will go to support this view."—P. 149.

Much less objectionable is the author's remark, that the question of the mercurial or non-mercurial treatment can hardly be solved by "returns," as the *kind* of sores is not mentioned in them. —P. 94.

Mr. Labatt is inclined to believe that "the varieties of the disease depend, not on a plurality of poisons, but on some modifying constitutional cause or accidental circumstance, such as the mode of living adopted previous to the time of infection. He here dissents a little from Carmichael, whose classification he adopts, and loses the opportunity of discussing the value of some notions respecting plurality or duality which have lately been raised in France. A modern book should have touched on that subject. Talking of France, we must object to the author's quoting Ricord in the original French. Who shall enlighten those of his readers who do not understand the language?

Mr. Labatt speaks successively of primary syphilis, bubo, constitutional syphilis, syphilization, hereditary syphilis, gonorrhœa, &c. &c. On these different heads we shall offer a few observations, premising that we were favourably impressed, not only with the numerous proofs of the extensive reading and the zeal in the collection of facts evinced by the author, but also by his clear style and evident desire of honestly arriving at truth.

In speaking of *simple chancre*, the author quotes Ricord and Colles respecting the destruction of the same before the fifth day. The latter author cut out a chancre completely on the first or second day *after its appearance;* yet the occurrence of secondary symptoms was not prevented. (Colles on Veneral, p. 77.) But Mr. Labatt doubtless recollects that Ricord says, before the fifth day after *the last sexual congress.* There is no knowing how long, in Mr. Colles' case, the virulent matter had been implanted. We grant, however, that the majority of the chancres are not *observed* before the fifth or sixth day after the last coitus; so that the surgeon has, in point of fact, but very seldom an opportunity of promising safety to his patient by using either the knife, the Vienna paste, the monohydrated nitric acid, or the charcoal and sulphuric acid lately recommended by Ricord.

On the subject of slitting the prepuce in phimosis, the author quotes Mr. Lawrence, who says respecting the risk of inoculation for the wounds made by the knife, "I have divided the prepuce, in a great number of instances, in cases where the worst kinds of ulceration have existed either upon the glands or upon the internal surface of the prepuce itself, and I have never in any one single instance seen any ill consequences result...... not even when a sloughing or phagedænic ulceration has existed." .... (THE LANCET, 1829–30) Now, the facts are, of course, undeniable; but how are they explained? and how can it be shown that, as a rule, inoculation may take place? Simply by stating that phagedæna and gangrene destroy the *specific activity* of the pus. And it may, moreover, be urged that in those cases where no phagedæna had existed, the sores may have been in the healing period, or the ulceration may have been highly inflammatory, but not virulent at all.

Speaking of paraphimosis, the author expresses himself as follows:—

> "Primary syphilis may also be complicated with another morbid condition of the prepuce, which, like that just described, frequently results from neglect and mismanagement, and is sometimes accompanied by very urgent inflammatory symptoms. Instead of the contracted orifice of the prepuce being in its natural position, as in phimosis, it in this disease constricts the body of the penis posterior to the glans," &c., &c.—P. 65.

Now, this description is irreproachable; but is it really in its place in a book not of an elementary character? We have quoted this passage as a pattern of many others to be found through the work, and which, though perfectly legitimate in themselves, rather disappoint the reader who is in search of original "observations in civil and military practice."

At page 99, Ricord is said to use *hyosciamus* with his iodide of mercury pill. This is not quite correct. The pill is mostly composed as follows: proto-iodide of mercury, extract of lettuce, of each half a drachm; gummy extract of opium, nine grains; extract of guaiacum, one drachm—make thirty-six pills.

At page 105, the author states that, in his practice, the average duration of treatment by mercury was thirty days and a fraction for primary syphilis unconnected with bubo, the total number of cases being eighty-six. This result, adds Mr. Labatt, does not differ much from the returns of the official inquiry instituted by Sir James M'Grigor, which, in 2827 cases, showed the length of treatment to be thirty-three days. Now these figures, as we stated before, lose a great deal of their value by the vagueness with which the primary symptom is mentioned. It is of no use to say that "many were complicated by a high degree of local inflammation, some by phimosis or paraphimosis, some by sloughing, and three by gangrene; but it should in all further inquiries be stated whether the sore was indurated or not, and whether the chain of hardened inguinal glands, generally accompanying sores with an indurated base, were or were not present. Soft chancres will heal with or without mercury, and therefore statistics are not wanted; but military surgeons, who have such fine opportunities of watching their patients for years after the treatment, could give us extremely valuable data as to the power of mercury in keeping off secondary infection. It is to be hoped that the subject will be taken up by one or more of the very intelligent and talented men who hold medical commissions in any of the services.

In the chapter on Bubo we must find fault with the term "*syphilitic bubo*," which does not convey a sufficiently precise meaning; but we certainly mean to give a trial to the perpendicular direction of incision, as Mr. Labatt has tried the plan, and "has found that the wound healed much sooner than when buboes are opened in the usual manner." P. 127.

We are glad to find, in the chapter on Constitutional Syphilis, that the author is able to say that "it will *sometimes* happen, notwithstanding all our efforts, and the adoption of all the means at our disposal, that certain sequelæ will set in." (P. 145.) From our own experience and that of others, we should say that it *often* happens; and few indeed are the cases where, the primary sore being decidedly indurated, we succeeded, by the use of mercury, in keeping off constitutional symptoms. But we are, on the other hand, firmly of opinion that a well-regulated treatment, of sufficient duration, and with the "restrictions" which Mr. Labatt judiciously recommends, would yield better results. In fact, the paucity of cases of secondary syphilis in soldiers is a proof that a great deal of mischief might be avoided by a more careful method of administering mercury.

At page 165 we meet with the heading, *Phagedænic Eruption*, which is apt to mislead; the author probably meant the eruption, which, according to Carmichael, *follows* phagedænic primary sores. An eruption is not *in itself* phagedænic; the pustular, tubercular, or even vesicular, may take on that character in certain subjects; but the eruption always presents *at first* some of the appearance of the ordinary unspecific manifestations on the skin. Even some of the destructive ulcerations of the soft palate do not begin as such, and only take a spreading character when the constitution of the patient, or his manner of living, favour such a deviation.

Syphilitic Sarcocele forms an interesting chapter; but we would submit that there are symptoms peculiar to tubercular sarcocele and carcinomatus enlargement of the testicle which will aid us considerably in our diagnosis, independently of the "constitutional symptoms" which are certainly a valuable, but not the "only guide." When the case is quite made out as syphilitic sarcocele, we would certainly not side with Mr. Labatt, and give *mercury;* iodide of potassium is the only remedy we can depend upon, and which, when the treatment has begun early, has, in many cases, prevented the destruction and subsequent wasting of the organ.

Space will not allow us to follow Mr. Labatt further; we would only add, that it is a pity he gave merely *statements* as to syphilization, without critically examining its value; and, also that he maintained the unspecificity of mucous tubercles, alias condylomata. As these symptoms mostly appear in women, we should, perhaps, not expect complete accuracy in an author who gives us his experience from military hospitals. There is, however, much to be commended in the book, and the profession are under obligations to Mr. Labatt for having recorded some of the valuable facts which have come under his cognizance.

On Epilepsy and other Convulsive Affections, their Pathology and Treatment. By CHARLES BLAND RADCLIFFE, M.D. 8vo., pp. 383. London: Churchill.

THE method of investigating the phenomena of disease by first inquiring into the phenomena of the healthy body, is becoming now the great medical fact of the time. Physiological pathology is the science word in medicine. The empirical school has taken to flight, Herophilus lives once more, and Harvey's immortal text goes forth after long oblivion as a truth which it were a sin to doubt—"The physiological consideration of the things which are according to Nature is to be first undertaken by medical men, since that which is in conformity with Nature is right, and serves as a rule both to itself and to that which is wrong."

Amongst those who at the present moment have entered on the new race of medical science, the author of the book before us stands in a forward place—a very accomplished man clearly, a man of deep thought, and what is better than all, a man entirely earnest in his own business. There is in the book before us no feature, indeed, more marked than the earnestness in which it is conceived. We may differ in opinion with the author, or find fault with his conclusions, it matters not, there is an earnestness which looks down ill-bred criticism, and secures respect in the midst of opposition. Yet more, there is a friendliness in the work which enchains. The captiousness of the authority founder is nowhere seen. Whatever is new is suggested as though it were known but forgotten.

The work consists of two parts. A first part, on the Physiology of Muscular Motion; a second part, on Epilepsy and other Convulsive Affections. The basis of the first part was laid by the author in 1851; that of the second in 1854. The second is the simple offshoot of the first; an attempt to explain that which is wrong by the translation of that which is right.

In the physiological part an attempt is made to establish a new view or explanation of the phenomenon of muscular contraction. The grand proposition, as given in the first page, being, "that muscle contracts, not because it is stimulated to contract by nervous influence, or electricity, or any so-called stimulus of contraction, but because something has been withdrawn from the muscle, which previously prevented the free action of common molecular contraction." This was the author's first argument in his first work. Now he expands it into major propositions and a minor series. The major propositions run as follow:—

> "First proposition.—That muscular contraction is not produced by the stimulation of any property of contractility belonging to muscle.
>
> "Second proposition.—That muscular elongation is produced by the simple physical action of certain agents, electricity and others, and that muscular contraction is the simple physical consequence of the cessation of such action.
>
> "Third proposition.—That the special muscular movements which are concerned in carrying on the circulation—the rhythm of the heart and those movements of the vessels which are independent of the heart—are susceptible of a physical explanation when they are interpreted upon the previous view of muscular action."

The propositions thus stated are supported by much careful and close argument of an experimental and general character. The first proposition is thus supported by a series of propositions placed in a negative sense, and which are intended to prove that muscular contraction is *not* produced by the stimulation of electricity, of nervous influence, of blood, of any mechanical agent, of light, of heat or cold, nor of any chemical nor analogous agency. Let us, before going further, glance briefly at the mode in which the abovenamed arguments are sustained.

The first statement, "that muscular contraction is not produced by the stimulation of electricity," is argued from experiment. Repeating some of the experiments of Dr. du Bois-Reymond, and adding others of his own, Dr. Ratcliffe states that muscle does *not* contract so long as the galvanic current is passing through it, and that muscle does *not* contract so long as it is left to the undisturbed possession of the muscular current, but that contraction does occur when either the natural or artificial current is manifestly absent. *Ergo*, there is but one course open, and that is to connect the contraction with the absence of the current.

The second proposition, "that muscular contraction is not produced by the stimulation of nervous influence," is argued also from experiment. First, in relation to the electrical changes of nerves concerned in muscular action; and secondly, in regard to the effects incident to the disconnexion of nerve and its muscle.

In relation to the electrical changes of the nerves concerned in muscular action, the author concludes, that muscular elongation is coincident with the action of natural or artificial electricity upon the nerve, and that muscular contraction is connected with the diminution or annihilation of this action; while, in reference to the disconnexion of nerve and muscle, and the effects of such disconnexion, he maintains, from his own observations and from those of Dr. Brown-Séquard, that after disconnecting by division nerve and muscle, the muscles of the paralyzed limb pass into an evident and continued state of contraction.

An objection to the view here advanced by our author is forseen by him. It may be asked, he says, if a fatal objection may not be drawn from the mode in which the will acts in producing muscular contraction? Does not the will stimulate the muscle to contract? He meets this objection by the suggestion, that the will may act, "not by imparting anything to the muscles, but by withholding something from the muscles," a suggestion certainly which, in our present state of knowledge, we had better have said *ignorance*, of the will force, is quite as tenable as the old idea of a stimulus supplied by the will and accepted by the muscle.

"That muscular contraction is not produced by the stimulation of blood," is argued mainly from the fact, first shown by Brown-Sqéuard, that rigor mortis may be relaxed, and the lost irritability of dead muscle restored by the injection of blood into the vessels of the dead limb. Here Dr. Radcliffe meets an argument of the last-named eminent physiologist, that venous blood produces muscular contraction, by assuming that the convulsions of asphyxia are rather due to the want of the stimulus of the red blood than to any stimulus derived from the black blood with which the system of the asphyxiated animal is charged; and he concludes the section by intimating that muscular elongation is coincident with the entrance of blood into muscle rather than the reverse. We give our full assent to the view that the influence of black blood on muscular motion is a negative not a positive influence. The sum total of the arguments by which the first major proposition is enforced, is given in a description of rigor mortis as the type of muscular contraction in general.

> "For what," inquires the author, "is the case with respect to this form of muscular contraction? The case is simply this. As long as there is any trace of that action of which the 'muscular current' is a sign, so long is there no rigor mortis. As long as there is any trace of that action of which the nerve current is a sign, so long there is no rigor mortis. If this action dies out speedily, as in persons in whom the vitality of the frame has been exhausted by long life, or by chronic disease—such as consumption—the muscles become speedily rigid; if this action dies out slowly, as in persons who have been cut down suddenly in the full glow of life, the muscles are equally slow in becoming rigid. Once contracted, moreover, the muscles remain contracted until they break up in the ruin of final decay—an event which happens most speedily in the case where the muscle retains its physical integrity least perfectly. And this is precisely as it should be according to the premises; for, according to the premises, all that is necessary to its continuance is the absence of this action, and the physical integrity of the muscular fibre."

We must pass over the arguments introduced in support of the second proposition to notice the explanation given by our author of the cause of rhythmical action of the heart. In this section his ability as an argumentatist is very conspicuous. Up to the present time, the view generally adopted is that the ventricular systole is called into force by the stimulus of blood thrown into the ventricle. Without, for the moment, considering Dr. Radcliffe's arguments, we confess that this view has never been satisfactory to our own minds. For it must be remembered, that the ventricular contraction is not incident to the mere presence of blood in the cavity (inasmuch as the ventricle could never be filled with blood if the simple fact of the presence of blood were the only cause of contraction), but occurs only at a time when there is a certain amount of blood present in the ventricle, and not, as it were, as a consequence of this, but as a coincidence, or, rather, as if the times of ventricular distension from blood and of the ventricular contraction were simultaneous. Again, it must be remembered, that the ventricular contraction may be completely paralysed by the mere distension of the ventricle with blood. And, lastly, the quality of the two kinds of blood in the two simultaneously acting ventricles is entirely different, the one venous, the other arterial. We are content, therefore, to believe, that the hypothesis of blood in the cavities, as the stimulus for contraction, is founded in the common error of mistaking the coincidence of two acts as an instance of cause and effect.

To these objections to the old hypotheses, Dr. Radcliffe adds others. He points out that at the systole the blood rushes through the coronary arteries into the structure of the heart, and that the diastole of the ventricles is attendant on this new supply of blood in the intimate parts of the organ. It is inconsistent, therefore, to suppose that blood which will stimulate the muscular wall to contract when simply enclosed in the muscular cavity, should set up the very opposite condition when diffused through the vascular network of the muscular wall.

But what, then, is Dr. Radcliffe's explanation? We will give it in his own words, that no errors may be committed.

> "On realizing the phenomena of the heart's action more distinctly, it becomes even still more improbable that the systole of the ventricle is caused by any kind of stimulation, and of the blood more particularly. For what are the facts? At the systole, the blood rushes through the coronary arteries into the coats of the heart, and the diastole of the ventricle is attendant upon this rush. And after the blood has remained in these coats until it may be supposed to have lost some of its arterial properties, then the systole returns. These are the simple facts; and thus, if stimulation has to do with the phonomenon at all, it is with the diastole and not with the systole.
>
> "It appears, indeed, as if the *ventricular diastole* were due partly to the force with which the blood is injected into the coronary arteries at the ventricular systole, and partly to the elongating electro motive effects of the arterial blood upon the cardiac fibres. It appears also as if the diastole of the ventricles were made to continue as long as the blood retained its arterial properties, and that the systole returned when the oxygen was exhausted, and the arterial converted into venous blood, and thus it appears as if the rhythm of the ventricles had a part of the explanation; for, according to this view, so long as the proper blood continues to be supplied, and so long as the ventricle continues to be capable of responding to it, so long must the systole give rise to the diastole, and the diastole be followed by the systole."

The argument against this view which will be most readily urged is, that the diastole of the ventricles is coincident with the systole of the auricles, but that auricles and ventricles are both supplied with blood through the coronary circulation at the same moment and with the same blood. Dr. Radcliffe meets this objection by the supposition that the systole of the auricles is not an active muscular contraction, but a falling in of the auricular walls upon the sudden withdrawal of blood from the auricles by the diastole of the ventricles. He infers that the absence of valves at the mouths of the great veins indicates the passive character of the auricular systole. To this view, after careful consideration, and with every deference, we must demur. Whoever will watch carefully the action of the heart when exposed to view will agree with us that the systole of the auricle is no mere collapse; whoever will suspend for a moment the flow of blood through the great veins, and when the auricle is empty of blood will prick the auricular wall, and see the auricular contraction; whoever will study the mechanism of the auricles, and will compare their structure and power with the amount of work which they have to perform; and whoever will remember the persistence of auricular action after death, must be satisfied that the auricular systole is an act as purely muscular as the systole of the ventricle or the closure of the hand.

Moreover, the statement that there are no true valves to the great veins entering the auricles, does not, as we opine, answer to the construction which Dr. Radcliffe would put on it. For as the column of blood through the veins is always in progress, there is a constant and steady pressure onward into the auricle by which the pressure resulting from the auricular contraction is resisted, while the muscular arrangements around the embouchures of the veins favours the closure of those embouchures during the contraction. Virtually, therefore, the mouths of the great veins are valved. But while in this special point we feel bound to differ with Dr. Radcliffe, we recognise in full the importance of his physiological labours, and the necessity of subjecting them to such examination as shall put them beyond the range of dispute. The novelty of his views gives no reason for hesitation in learning them, while the radical changes which they suggest have a direct bearing on some of the grandest problems in physiology and pathology.

We have already stated that the physiological part of Dr. Radcliffe's treatise is but the prelude to another part on "Epilepsy and other Convulsive Affections."

Taking epilepsy as the great type of all convulsive disorders, and the key to their interpretation, he describes, first, simple epilepsy as an ideal type of the epileptiform convulsion, and then tremor, simple convulsion, epileptiform convulsion, and spasm. In various passages in this division of the book the reader will find evidence of masterly authorship, and an acquaintance with the subject treated, not less masterly than the style. The description of the epileptic paroxysm at pages 145–152 is amongst the most graphically written descriptions of disease which we ever remember to have read. The phenomena are struck out with such truthful boldness that the mind receives, as in a stereoscopic picture, the veritable thing present in its absence.

Throughout the argument progresses in accordance with the views regarding muscular contraction advanced in the physiological part. Muscular contraction is produced by simple cessation of the physical act of certain agents which produce muscular elongation. *Ergo*, convulsive action, however manifested, is a sign of a degraded vitality, and the treatment which it calls for, such treatment as shall bring into play those influences by which the body is nourished and sustained. It is not probable that a man of such a philosophic turn of mind as our author should come forward either with pill, potion, or plaister. He does not. "Specifics" he has none to offer, though he gives candidly the history of remedies which have been advised by others, and with an evident lingering towards some few medicines of the "tonic" fraternity.

For all further particulars we must direct the reader to the original work. Our descriptions of it are, by the necessities of time and space, imperfect; but we have read it from the first to the last page with so much pleasure, that we envy the man who has not read it the treat he has in store. The book, dealing as it does with problems, which in our present flickering knowledge of the grand forces of life do not readily admit of demonstration, may, and probably will, lie open for long discussion and heavy opposition. But it is just the book which, by eliciting inquiry, will perform the great object of all good works on natural science, the revelation of the laws of Nature by the true translation of their phenomena.

Health and Disease: their Laws, with Plain Practical Prescriptions for the People. By Benjamin Ridge, M.D., F.R.C.S., &c. Pp. 624. London: Chapman and Hall.

It appearing to the author of the present work that "the dull routine of *medicine* is the only branch of science that lags behind; it is a cumbrous load resembling only itself, and is a mere heavy lumber dragged along by its own slow-moving forces, apparently uninfluenced by the changes of the times" (p. iv.), he has undertaken to give it "a gentle jog," as the Rev. Sidney Smith and the rural clergy he alludes to were often called upon to administer to their poor parishioners. Badly, however, as it appears to Dr. Ridge, that "the practice of medicine wants modernizing—wants to be thrown open and ventilated—wants some fresh light thrown upon it" (p. v.), we are consoled by finding that all this is a task not by any means beyond his own power of remedying. There is no difficulty in doing this, it seems, "if the practice of medicine were freed from much of its absurd, dull routine and red-tapeism, and from the constant torturing of what are miscalled 'medical facts,' into every possible and impossible effect of some morbid derangement in the system." (P. vii.) But whether there exists or not a difficulty, done it must be, seeing that medicine "is at present behind the age—positively obstructive—and must be moved on." (P. vi.)

Whilst Dr. Ridge, in the pages before us, on the one hand, undertakes to act the part of a professional policeman over our dilatory Æsculapius by constantly reminding him to "keep moving," on the other hand he not only endeavours "to convey useful and philosophical information in plain, common-sense language .... to those who cannot be presumed able to dive deep into medical science" (p. vi.), but likewise offers "a few new ideas to the profession which they have not been taught at their *alma mater*, or learnt elsewhere in their study of medical literature." (P. vii.) Our readers have now the *carte* before them, or, to use a phrase not inappropriate to to certain cases, "you see your dinner." We are not sure that they will like it, and we cannot promise them how they shall find it done, but it may be that, tired of ordinary things, they may choose to risk anything for a new sensation. If so, they may like to make acquintance with this "dainty dish" which Dr. Benjamin Ridge has "set before the king."

Transactions of the Medical Society of King's College, Vol. II., Winter Session, 1857—58. Edited by Alfred Meadows, M.B. Lond., &c. Pp. 222. London: Walford.

Creditable as this volume is, we think the papers it contains should have appeared in the pages of some of the already existing periodicals in preference to their being made to increase the already too numerous series of scientific journals. We fear the Society may find they have entered upon rather an expensive amusement.

A Dictionary of Practical Medicine: comprising General Pathology, the Nature and Treatment of Diseases, Morbid Structures, &c. &c. By James Copland, M.D., F.R.S., &c. Parts XIX. and XX., completing the work. London: Longman and Co., 1858.

When a man, having devoted thirty years of his life to the performance of a literary work, alone and unassisted, satisfactorily concludes it, it is natural that he should view the result of his labours with some satisfaction. The learned author of the "Dictionary of Practical Medicine" no doubt regards the completion of his undertaking with this feeling; and we are bound to admit, in all justice, that this work is an honour to himself and to the professional literature of this kingdom. An almost herculean task has been attempted and commensurately finished; and its laborious and painstaking author may now, if he choose, enjoy the *docle far niente* of a literary siesta. But the compiler of such a treatise as is now before us, is not likely to be one who will "rest long upon his oars;" the energy of mind and necessity for work which prompted to its undertaking are too much part and parcel of the individual ever to leave him and to let him rest. Of what he has done—and it is sufficient for more lives than one—he thus expresses himself:—

> "Entertaining no mean opinion of the legitimate exercise of the healing art, viewing his profession in the light in which it was held in ancient and even in more modern times, and estimating his work according to the experience and the research, to the time he has devoted to it, and to the amount of labour and the sacrifices it has cost him, he feels assured that he has not laboured in vain, and he cannot doubt that it will be of essential service to many—that suffering humanity will be benefited, and rational, learned, and scientific medical practice advanced by it. . . . For his name and memory, he leaves them to men's charitable speeches and to foreign nations and the next age." Pp. xxix.

The concluding parts contain the termination of the article on "Vagina and Vulva," the subjects of "Veins," "Venereal Diseases," "Vertigo," "Voice and Speech," "Vomiting and Retching," and "Worms." There is a short supplement upon the "Supra-renal Bodies," a voluminous general index, and a valuable and lengthy table of "classified contents." Title pages for the three first volumes are also appended, and an analytic preface is likewise affixed.

In the "Dictionary of Practical Medicine" we see a reflex of German erudition, French acuteness, and British practical common sense. It has long had a European reputation, and will, we have no doubt, successfully maintain what it has taken so much patient trouble to acquire.

Outlines of Astronomy. By Sir JOHN F. W. HERSCHEL, Bart., K.H., Member of the Institute of France, &c. &c. Fifth Edition. Pp. 714. With seven plates and numerous diagrams. London: Longman and Co., 1858.

THESE well-known "Outlines" have now attained their fifth edition. They were originally based upon and may be considered as an extension and improvement of the author's Treatise upon Astronomy, forming a portion of the "Cabinet Cyclopædia," published five-and-twenty years since. From that time until the present they have commanded universal approbation, as forming the nearest approach to a lucid and easily to be comprehended exposition of an abstruse subject by one of its highest authorities. In former editions the various revisions have been effected without incurring the necessity of much typographical reconstruction. In the present one, however, great alterations in this respect have been obliged to be adopted, astronomy within the last few years having been enriched by so many and such considerable additions. Of the many improvements of the present issue, the following may be referred to as examples of greatest novelty—viz., an account of the methods by which the mass of the earth has been determined, and by which a solution of the difficulties connected with the ancient solar eclipses have, it is presumed, been finally subjugated; a brief account of M. Foucault's remarkable pendulum experiments, and of that beautiful instrument called the gyroscope; to these may be added a notice of Professor Thompson's speculations on the origin of the sun's heat, and of M. Jean Reynauld's views on the secular variation of our climates. The consideration of the subject of the moon's habitability, of the cause of the acceleration of Encke's comet, may also be referred to as important additions to controversial astronomy. To the extent of its pretensions, Sir John Herchel's book, as it might be expected, stands quite unrivalled.

The Ophthalmoscope. By JABEZ HOGG, Assistant-Surgeon to the Royal Westminster Opthalmic Hospital. London: Churchhill.

THE substance of this *brochure* has already appeared in our pages, and in a more condensed form had previously been brought before the Medical Society of London. The author's apology for a reprint "is, shortly, that he believes the instrument destined to open out a new era in ophthalmic medicine; and by the publication of this pamphlet he hopes to assist in diffusing amongst the profession a knowledge of its practicability and usefulness in the diagnosis and treatment of some obscure forms of eye-disease."

A short account of the appearances presented by the healthy eye, when viewed by the aid of the ophthalmoscope, precedes that of the morbid alterations which this instrument is capable of detecting in the organ. Such introductory notice is of value; and it may be remembered that the plan is carried out *in extenso* in Mr. Dixon's work "On the Eye;" so true is it of a part as of the whole—"Pour savoir l'homme malade il faut savoir l'homme sain." Mr. Hogg observes:

> "The optic nerve is seen faintly tinged with pink, and from its centre—the papilla optica—emerge the artery and vein of the retina; the arrangement generally being, an artery and vein passing upwards, and a similar pair downwards; both vessels then divide into many branches, and run on towards the periphery of the retina."

This concise and accurate account presents a strong contrast to the inaccurate and inflated one given by Demarres, who, in the last edition of his work "On the Eye," remarks:

> "Cette papille dont *je compare volontiers l'aspect à celui de la lune se détachant sur la ciel par une belle nuit* parait faire une très légère saillie sur les parties environnantes, ainsi que, semblerait le prouver une petite ombre portée sur un des côtés de sa circonférence, ombre dont la position varie suivant la direction de la lumière. Cependant il n'en est pas ainsi, car la papille est sur le même plan à peu près que la choroide."

We must, however, do the author the justice to say that, in a few pages further on, he qualifies his poetical description, and at page 778 tells us that—"La forme est rarement ronde; elle est presque constamment un peu ovale dans le sens vertical; quelquefois elle est aussi un peu anguleuse." Then follows a description of the vessels proceeding from the papilla, which "sont au nombre de quatre ou cinque, qui toutes viennent d'un tronc unique; les veins de même nombre le plus ordinairement, et ne se distinguent des artères que par un plus gros diamètre et une couleur plus brune." Demarres' fine writing on the optic papilla is quite comparable with that of his countryman Sacombe, who, in watching all the processes of a natural labour, says: "the clock struck twelve, the membranes burst, and the *liquor amnii* discharged with such violence as bedewed me from head to foot; *and now, for the first time, I perceived the vermillion disk of that globe which was about to thrust a new being into life.*"*

The opthalmoscope employed by Mr. Hogg is one of a very simple description, and he has done well in avoiding that tedious account of many varieties of it with which so many authors endeavour to swell their works. In the *armamentarium chirurgiæ* simplicity may often be regarded as the synonym of perfection, and the adage is as true as trite, that the "best workmen employ the fewest tools." The directions given for the employment of the instrument though not numerous, are ample and comprehensive, and a plea for its employment is thus happily introduced:—

> "It will often lead to the discovery of very slight changes in an eye, otherwise pronounced, but erroneously, quite incurable. This was shown in cases which occurred in the late Crimean war amongst the young soldiers, some of whom were malingering, and others might have been pronounced blind and unfit for duty, and placed on lists for pensions; in fact, in the absence of the ophthalmoscope, it would have been impossible to

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* Quoted in Merriman on Difficult Parturition, p. 191.

decide whether these cases were exactly as represented or not. But the use of this instrument at once cleared up doubt, showing slight extravasations of blood, &c., not necessarily of an incurable character."

The cases which the author has chosen for illustration of the use of this instrument are well selected, and bespeak the care he has bestowed upon this subject. This little volume will doubtless find a ready sale from its practical utility, which claims for it a place amongst the standard works of the day on ophthalmic medicine.

Humble Creatures: the Earth-worm and the Common House-fly. In eight letters by JAMES SAMUELSON, assisted by T. BRAXTON HICKS, M.D., Lond., F.L.S., &c. With Microscopic Illustrations by the authors. London: Van Voorst. 1858. Pp. 78.

JUST the book to put in the hands of the young naturalist beginning to feel that glow of enthusiasm which springs up in the mind in the early days of zoological inquiry and rambles. Precise scientific information is conveyed in easy and enticing language, and the whole subject treated in such an unpretending way as to merit warm commendation. We perused with much interest the account (p. 20) of the increase of depth of some pasture-lands, through the agency of the common earth-worm. We confess the explanation was quite new to us, though it seems Mr. Darwin had published a paper on it in the second series of the "Transactions of the Geological Society."

Transactions of the Medical Society of the State of New York, for the year 1858. Albany: Van Benthuysen, Broadway.

THIS handsome volume, containing 653 octavo pages, records the doings of the most important Medical Society in the United States. It commences with a clever Annual Address, on "Air, Exercise, and Sunlight," by Augustus Willard, M.D., President of the Society, delivered before the members of the Society and the Legislature, in the Capitol of Albany, Feb. 3rd, 1858. This is followed by a series of biographical sketches of the more illustrious members whom the Society has lost during the year. These are for the most part illustrated by portraits. Many of the scientific papers which follow are of considerable interest; and if few of them have claim to the merit of originality, yet most of them deserve the praise due to honest investigation and careful elaboration of detail. An excellent paper on "Anæsthesia," by Dr. Van Buren, reviews the various agents used and proposed, giving the palm very decidedly to chloroform. It would seem, however, that hitherto sufficient care had not been taken to prepare perfectly pure chloroform in New York, and hence the results have been less satisfactory than elsewhere. The art of administering chloroform does not appear to have reached its highest development in the American States, and American Surgeons may take an useful hint from the paper on this subject which we lately published, by Mr. Potter, of St. George's Hospital. The seventh paper, from the pen of Dr. Kendall, gives a valuable account of an epidemic of "Cerebro-Spinal Meningitis," with petechial typhus, which occurred in 1857, in Onondaga county. A somewhat similar epidemic is described fully by Dr. Squire in the thirteenth paper. This paper is in many respects a model of clinical study. The twentieth communication—the Vice President's Address, by Thomas B. Brinsmead, M.D., is one of the most elaborate and thoroughly valuable reviews of the history and etiology of disease during the year which has fallen under our notice. It is accompanied by elaborate tables of disease and of meteorological conditions during a long series of years. A Statistical nosology is supplied at the end of the paper. The whole forms a contribution of great value, and demanding labour as well as talent on the part of the author. Many of the papers are illustrated by engravings of very various merit—some of them well-executed steel engravings, others poorly lithographed. The entire volume is one which does honour to the Society both by its size and by the value of its contents.

Electro-Chemistry with Positive Results. By CHARLES CHAMBERS. London. John Churchill.

MR. CHAMBERS holds that the two electricities are material elements, and that they combine with the other material elements as those elements combine together, and that compound bodies are decomposed by the two electricities precisely as the ponderable elements decompose those bodies—namely, by respectively combining with the constituents of the body which is under decomposition, and thus in all electro-decomposition those bodies are given off in combination with positive electricity which are given off at that wire, and *vice versâ*. Various experiments are related, which are supposed to corroborate this view. They are not in any way satisfactory. We see only in the hypotheses of Mr. Chambers a speculative philosophy of somewhat wild character. One merit this book possesses. If it abounds in untenable novelties, it is wholly free from the dogmatism which is wont to accompany such theories. In some respects it is suggestive, but it is not a satisfactory guide.

On Dislocations and Fractures. By JOSEPH MACLISE, F.R.C.S. Fasciculus V. London: Churchill. 1858.

THIS fasciculus deals with dislocations and injuries of the bones of the forearm. It is full, accurate, and useful. The plates admirably illustrate this very important class of injuries, and are such as no surgeon can henceforth fitly dispense with. We regret to perceive the re-appearance in this number of that unintelligible jargon of language against which we formerly protested as serving only to conceal the author's meaning. Who, for instance, can be supposed to comprehend the meaning of the following sentence, apologizing for a digression to comparative anatomy.

"Such being the idea which the comparative method leads one to entertain of the general design and mechanism of the arm, why need that method apologize for its presence in a work of this kind, if only in the character of a *reflecting exampler* it serves to *polish* (!) the now rusting scalpel of anthropotomy, and *reclaim* (!) to tactile function the callous hand of 'bone-setting?'"

In answer to which question, so singularly abundant in paradoxical figures of speech, we would ask—Why should it appear at all, unless it can talk plain English?

De l'Alimentation et du Régime. Par M. Jackques Moleschott. Traduit de l'Allemand, sur la Troisième Edition, par M. Ferdinand Flocon, et révû par l'Auteur. Paris, Victor Masson. Pp. 291.

Our readers are probably aware that Moleschott has published a popular *résumé* of the results recorded in his larger treatise upon the "Physiology of Alimentation," intended for scientific and professional men. This popular German handbook has passed into three editions already. Its utility is considerable, seeing it tends to displace much quacking rubbish about diet and regimen, written by men no wiser than their dyspeptic dupes. In it we find the greatest simplicity associated with the highest scientific value. M. Flocon has done the French public some service in clothing Moleschott's little book with its native tongue. His translation has had the advantage of the author's revision, and we can safely recommend its perusal to those who are French but no German scholars.

Observations on Certain Strumous Swellings, &c. By P. C. Price, Surgeon to the Great Northern Hospital, and the Metropolitan Institution for Scrofulous Children at Margate. Reprinted from "Transactions of Kings Collage Medical Society." Pp. 16.

Mr. Price is already known as the author of various essays upon the pathology and treatment of strumous disease of the joints. In the pages of the present essay are recorded the various methods pursued by the author in the treatment of the most common forms of scrofulous swellings. The pamphlet contains some remarks worthy of consideration, as the practice advocated is based upon experience derived from an institution specially devoted to the relief of scrofulous children.

Miscellaneous Correspondence, &c.,

THE MARSHALL HALL METHOD OF TREATMENT IN ASPHYXIA.

To the Editor of The Lancet.

Sir,—If you consider the following case of resuscitation worthy of a place in the Lancet, you will please to insert it at your earliest convenience.

I beg to state that I succeeded in resuscitating by the Ready Method a child apparently dead at birth. There was nothing out of the common about the case, except that it was a face presentation. Duration of labour, thirty-six hours. The funis was twisted thrice round the neck; and the infant gave no sign of life whatever. I thought it almost useless to adopt any plan; but after continuing the above method for some time the child made a deep inspiration, and in about three-quarters of an hour I succeeded in restoring the little fellow to life. He is now nine weeks old and doing well. The mother had epileptic convulsions, at intervals, during labour.

I am, Sir, yours obediently,

David Thomas.

West Cows, Isle of Wight, Aug. 1858.

HYDRAPHOBIA.

To the Editor of The Lancet.

Sir,—Infallible remedies for this terrible malady are not unfrequently published. However, perhaps you will allow me to inform the medical world through you, how far I have got towards testing the value of one of which I lately read in a French newspaper.

The paragraph stated that a French missionary in China had brought home a remedy, and placed it for testing in the hands of the director of the Veterinary School of Lyons. To that gentleman I wrote, and have received a courteous reply, stating that the Rev. Father Perni, a missionary had placed in his hands a remedy regarded in China as a certain one, consisting of insects resembling the *taupe-grillan*, or mole-cricket, as I find it translated, or *courtilières des jardines*, *courtilière* being translated *gryllatalpa*—palm-worm, only much smaller. Five or six of these are pounded up, and mixed with a spoonful of *vin-de-chine*, for which brandy may be substituted; and the patient takes also, in three doses in the course of the day, about thirty pills, which also have been handed to the director but the composition of which he is at present ignorant of. He promises me the results of any experiments made, and the placing the matter as it stands in your hands may possibly lead to something useful, or, if not so, conclusive to the contrary.

I am, Sir, your obedient servant,

Inquirer.

Derby, Aug. 1858.

MEDICAL ASSISTANTS.

To the Editor of The Lancet.

Sir,—To pass away his time, much like his master's ass, for naught but provender seems to be the lot of him who is compelled to act in the capacity of medical assistant. In last week's Lancet is the following advertisement from the proud city of Worcester:—

"Wanted a qualified assistant; salary, £70 a year, with furnished rooms and attendance."

Seventy pounds a year is just three shillings and ten pence per diem. For a long time we have been accustomed to yield to the cook or the butler in pecuniary estimation of our services; but, alas! now we are placed on a par with the navy. Can we wonder, then, so many amongst us overstep the bounds of professional etiquette, and resort to the puffing *in excelcis* (as you term it) rather than accept serfdom on such degrading terms. If Medicus has more practice than he can or feels disposed to manage himself, let him throw it up rather than eat the bread earned by the sweat of another man's brow. I hope that amongst the overcrowded ranks of our profession there is not one whom adversity compells to accept a situation so profitless and disparaging.

I am, Sir, your obedient servant,
A Qualified Assistant.
September, 1858.

OPIUM IN PARTURITION.

To the Editor of The Lancet.

Sir,—It has frequently struck me that much benefit would be derived from the elder members of the profession publishing occasionally any little circumstances that might arise in their practice, the result of their experience, not on account of their novelty, but to act as beacons for the guidance of the junior branches, and as records of facts for the contemplation of future generations. Their being of daily occurrence but too often renders them, to us, matters of little importance; while to those treading in our steps their knowledge would be invaluable.

Students, and indeed, too often those of more mature standing, are apt to overlook things of everyday occurrence, to run after the most serious cases, forgetful that, while some of the latter are met with but once in a lifetime, they have to contend with those of the former frequently and continually. While at the hospitals, see what a rush is made to the operating-theatre when a case of lithotomy or that of tying one of the great arteries is to be performed; but how few attend sufficiently to the dressing and bandaging of simple cuts or other wounds.

I was led into these reflections the other day while attending a labour of rather a lingering character, on finding the happy issue of my usual remedy at such times—viz., from twenty-five to thirty drops of tincture of opium (the extract does not appear equally efficacious), and to which I thought I would at once, through the kind medium of your pages, direct their attention.

When I commenced practice, some thirty years ago, I gave that remedy for the purpose, as I had been taught, simply of relieving pain; but I soon found that it had another and a far better effect, that of hastening the completion of labour. The fibres of the womb sometimes assume an irregularity of contraction, without producing their expulsive agency. Violent pain is the result—a pain that worries and wears out the patient's strength in a remarkable manner. Such a dose *then* has quite a talismanic power, and will indeed be seldom found to fail. Let my young friends try it; but at the same time remember that it must only be resorted to when the *pains are severe, without* the consequent and desired operation of their *expulsive influence.*

Yours obediently,
W. Thomas, F.R.C.S.
Queen-street West, Pembroke Dock, Sept. 1858.

FŒTID BREATH.

To the Editor of The Lancet.

Sir,—In the course of a long practice I have met with a few cases of fœtid breath of an unusual character, which I have never seen described by any medical writer. Two of these were very remarkable; the first in a woman who died recently at the age of eighty, and the other also in a female now living, and aged above forty. The fœtor, which I know has existed upwards of thirty years in one case, is of an extraordinary cadaverous character, diffusing itself through a house or church, as I have experienced. In both cases the health has been pretty good, the appetite moderate; no cough or dyspnœa; tonsils, throat, and nares, free from disease, the excretion from the kidneys, liver, and intestines, healthy; and the catamenia in the younger person quite normal. The complexion of each was dark and unhealthy in hue, which may indeed be said of all the members of their families. The old woman's mother, who died at upwards of eighty years of age, had, I am told, the same revolting peculiarity. Both of these individuals have, as you may suppose, remained *single*, although the elder contrived to have a son, who, however, was free from his mother's infirmity.

I have recommended the use of the chlorides internally and by inhalation, purgatives, &c., as remedial means, but do not think they effected the least improvement. The healthy state of digestion and respiration, with the natural performance of all the other vital functions, preclude the idea of fæcal accumulation or gangrene of the lung, as causes inconsistent with health or a protracted term of existence.

It will give me pleasure to hear any member of the profession elucidate the nature of the above cases, which have rendered the individuals a nuisance to society for many years. Neither of the parties, I understand, were ever in the least conscious of their own infirmity.

Your obedient servant, M.D.
Preston, September 1858.

News Items, Medical Facts, &c.

American Coffee and English Beer.—In the United States the consumption of coffee is eight times as great as in Great Britain, and probably the consumption of beer in Great Britain is eight times as great as in the United States.

Death from Chloroform.—The "Northampton Herald" contains an account of a boy who died from the inhalation of chloroform sprinkled on a handkerchief. He had received an injury of the toe, and the chloroform was administered, in consequence of his excitement, to keep him quiet.

Sanitary Rules for Camps.—At one of the

last meetings of the Academy of Sciences, Dr. Jules Cloquet gave an account of the Report on the Sanitary Condition of the Camp at Chalons, by Baron Larrey. This important document has attracted a large share of public attention. The author, who was specially appointed to attend his Majesty at the camp at Chalons in August, 1857, gives a detailed account of the sanitary condition of the troops assembled there at that period; and lays down rules, founded upon experience and sound reasoning, for the formation of camps, their internal police, and every element requisite for maintaining the health of an army in the field.

Medical Evidence.—Medical evidence should be in simple language when given before a jury. Really eminent men do not indulge in absurd technicalities, which are perfectly unintelligible to the community. The accompanying is a specimen from another class of witnesses. During a case of assault heard before Judge Falconer, the following occurred: Surgeon examined—"I found plaintiff had a severe contusion under the left eye, great extravasation of blood under the eye, and some abrasion of the skin." Judge—"You mean that he had a bad black eye." Surgeon—"Yes."

The Legion of Honour and the Medical Profession.—No less than twelve crosses were lately given to medical men, both in civil and military practice. Amongst the higher grades of the order we notice Messrs. Andral and Trousseau. These eminent physicians have obtained the rank of commander, which is the highest but one in the Legion of Honour.

Ricord and Chomel.—The late lamented Chomel was in the habit of retiring, at the end of each week, to a beautiful country seat which he had bought in the neighborhood of Paris. This fine estate was lately put to the hammer; and we are glad to find that it was knocked down to another illustrious member of our profession. M. Ricord is the purchaser, and thus will Chomel's château remain in professional hands. A fête was lately given at this country-seat by the great syphilographist, who was warmly congratulated by his friends on having at last acquired some of the characteristics of the bee, besides those of zeal and perseverance in labour.

A Lucknow Surgeon.—The Pera arrived at Southampton on Saturday, bringing home from Calcutta, amongst other gallant and distinguished passengers, Dr. Partridge, 2nd Oude Irregular Cavalry. It will be remembered that this regiment mutinied in June, and killed three of their officers,—viz., Lieutenants Barber and Fayer, and Captain Hays, the military secretary to the Chief Commissioner. Dr. Patridge was after this in Lucknow during the whole siege, in charge of the staff and native hospitals, and went through all the hard work and sufferings of that memorable siege.

Pepsine Wine.—We find in "L'Union Médicale" that the following pepsine wine is extremely agreeable and efficacious:—Take of starchy pepsine, prepared according to Messrs. Corvisart and Bourdault's formula, one drachm and a half; distilled water, six drachms; white wine (of Lunel), fifteen drachms; white sugar one ounce; spirit of wine (33°), three drachms. Mix until the sugar is quite dissolved, and filter. One tablespoonful of this wine contains about fifteen grains of pepsine, and may be given after every meal.

Courageous Conduct of Military Medical Men in India.—We have much pleasure in making the following extract from a despatch of General Whitlock, commanding the Saugor Field Division, to the Resident at Hyderabad:—"On the 19th inst., (April) in driving the enemy out of a very strong position covering the road to Bandah, I have the gratification of bringing under your notice the conspicuous gallantry displayed by the officers and squadron of the Hyderabad Contingent, under Captain M'Intyre, in a charge the irregular cavalry made on the enemy's guns under a most galling fire of grape and musketry, and in face of a most determined body of horsemen, who fought most boldly. . . To Captain M'Intyre, Lieutenant Ryal, and Surgeon Bradley, I am much indebted for their gallant conduct on this occasion; Surgeon Bradley attending his wounded under a very heavy fire."

Liberality of the late Professor Chomel.—This eminent member of our profession has left to the Medical Benevolent Society of the Department of the Seine three per cent. stock bearing an interest of £8 a year.

The Life of a Plant.—The last report published by the Horticultural Society of the Seine Inferieure states that some vegetables which were growing at Herculaneum at the time when that city was buried beneath the lava of Vesuvius in 79, and only recently dug up, acquired renewed vegetation on coming into contact with air and light. This statement seems difficult to be believed, as the natural question arises how did they escape the effects of burning lava?

Poisonous Effects of the Leaves of the Yew-Tree.—That the leaves of the yew are of pernicious influence was known to the Greeks and Romans, and confirmed by later authorities. The yew-tree itself may cause vertigo, lethargy, and even drunkenness, by the narcotic exhalations which it emits. We now read, in the *Journal des Landes*, that three horses belonging to the squadron of cavalry stationed at Mont de Maison died there suddenly a few days ago, and that, on dissection, it was found that they had been eating plentifully of the leaves of some yew-trees: the coats of the stomach evinced marks of the deleterious effects produced by this food.

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DELIVERED BEFORE

THE MEDICAL SOCIETY OF LONDON.

BY VICTOR DE MÉRIC, ESQ.,

SURGEON TO THE ROYAL FREE HOSPITAL, AND TO THE GERMAN HOSPITAL, DALSTON.

LECTURE I.

(*Continued from October Number.*)

ON THE UNICITY OR DUALITY OF THE VIRUS IN SYPHILIS.

Importance of the study of syphilis.—Specialism.—Diversity of opinions on syphilis.—The origin of the disease.—Syphilis in modern times.—Existence of a syphilitic virus.—Ricord's unicity.—Proposed duality.—Sketches of the doctrines of Hunter, Abernethy, Carmichael, and Wallace, as bearing on the plurality of the virus.—Bassereau's duality.—Ricord's opinion on a duality of poisons.—Present state of the question.

FOUR years after the publication of Mr. Abernethy's "Surgical Observations," Mr. Carmichael offered to the world his "Essay on the Venereal Diseases which have been confounded with Syphilis," 1814. This book contrasts most strongly with Abernethy's. The latter author relates what he sees, and remains perplexed; the former observes with a keen glance, seizes upon analogies and coincidences, and builds up a system. Abernethy is overcome by the multiplicity of divergent facts, and falls under their weight; Carmichael victoriously classifies his data, and creates a doctrine. These opposite courses illustrate once more what happens in paths foreign to science—viz., that two men placed in the same circumstances will use them according to the peculiar bias of their minds. At the very beginning of the essay, we perceive the lawgiver, the man who, with a powerful hand, dispels confusion and obscurity, and boldly introduces symmetry and rule where most surgeons were lost in chaos. "The yaws and sivvens," says Mr. Carmichael, p. 8, "have their appropriate laws and stated appearances, from which there is no departure. Why, therefore, should we suppose that peculiarity of constitution, or any adventitious circumstances, should prevent the syphilitic poison from producing its accustomed and characteristic effects? It is rational to think that its laws are as invariable as those of small-pox, cow-pox, or any other morbid poison with which we are acquainted."

These laws Mr. Carmichael considered he had discovered, and he thought that there existed a constant correspondence between certain eruptions and peculiar sores, so that from the appearance of the latter the former might be foretold. It is worth while to quote the scheme which the Irish surgeon proposed. He expresses himself in the fifth chapter of his work as follows: "The circumstance which most strongly forces itself upon our attention is the constant association of a distinct and peculiar train of constitutional ailments, with corresponding primary symptoms, demonstrating that the regularity which marks the character of all morbid poisons, also has a place in venereal diseases."

Mr. Carmichael then describes five classes of constitutional eruptions: the first comprises true syphilis; the three next, venereal affections resembling syphilis, and depending each on a distinct poison; the fifth includes eruptions which are quite unconnected with sexual intercourse, and arise spontaneously. I shall but just remind you, very briefly, of the principal features of these classes:

1. The scaly eruption which appears under the form of lepra and psoriasis, and terminates in ulceration, is alone produced by the syphilitic primary ulcer, characterized by its slow progress, and its indurated edge and base; and we find that both local and constitutional symptoms yield with almost invariable certainty and celerity to the action of mercury.

2. The papular eruption which terminates in

exfoliation of the cuticle may either be occasioned by the smooth superficial ulcer, without induration or ulcerated edges, or by a purulent discharge from the surface of the glans and prepuce; or, thirdly, by a gonorrhœa virulenta; and we have found that these different species of the same disease are alike capable of a spontaneous cure, or of being removed by external astringent applications; and that the constitutional disease they produce is, like the primary, also capable of a spontaneous cure, which is promoted by antimony and decoctions of the woods.

3. The pustular eruption which terminates in ulcers, covered by crusts, is either occasioned by the phagedænic or sloughing (primary) ulcers. These distinctive venereal complaints, in their primary stage, are best treated by such means as subdue inflammation and symptomatic fever, and by anodyne medicines, such as cicuta and opium. In their secondary stages, the decoctions of the woods, antimony and mercurial salts, in alterative doses, are the means most to be depended upon; but change of air, and such measures as may tend to strengthen the constitution, are also of unquestionable moment.

4. The tubercular eruption which terminates in deep, irregular ulcers, has been traced, *in one instance only*, to a primary sore, which, from the manner it undermines the skin, has been named the burrowing ulcer. But until other cases concur to demonstrate this connexion, it would be premature to conclude that the one always occasions the other. The treatment is the same for the phagedænic ulcer.

5. The diseases likely to be confounded with syphilis, which arise spontaneously, form a disordered state of the constitution, and frequently assume the form of the tubercular eruption ..... But after ulceration, the sores do not continue so extensive, jagged, and obstinate, and particularly under the means recommended, as those of a venereal origin. Treatment: nitrous acid, the woods, and alterative doses of mercury.

Now this classification rests upon the close observation of patients in a Lock Hospital, and emanates from a clear-headed man, who was determined to trust to facts only. Eighty-eight cases are, in the book before mentioned, related in full; and when we see how readily the imperfections of the system can be shown, we feel deeply impressed with the weakness which marks the proudest works of man.

And yet with Mr Carmichael we make a considerable stride. It is true that he completely neglected the valuable symptoms offered by lymphatic and glandular complications; that lepra and psoriasis hardly ever suppurate; that the supposed connexion of the papular eruption with the smooth ulcer, inflammation of the glans and prepuce, or gonorrhœa, will not stand the test of experience; that the pustular eruption is frequently unconnected with phagedænic or sloughing ulcers, and often follows the sore with the hard edge and base; that the latter sore is every day seen to give rise to papules or erythema, which latter eruption Mr. Carmichael does not mention at all; and lastly, that the cases of spontaneous eruptions are extremely unsatisfactory; but we have, nevertheless, due weight given to the indurated sore, which very properly, alone obtains the appellation of syphilitic, and we are advised to shun mercury in phagedæna and sloughing.

Mr. Carmichael, like Linnæus, seized upon one character only for his classification, and, by attaching an exclusive importance to eruptions, arrived, like the great naturalist, at an *artificial* system. But the Irish surgeon was too good a pathologist not to see what importance other symptoms could have; hence we find him saying, p. 215: "It is only necessary to advert to the constitutional affections of *the skin*, as they are the most obvious of those symptoms which can be traced to a primary ulcer; yet all the other constitutional symptoms are nearly as capable of being discriminated and arranged, at the expense, however, of a little more attention."

It is to be regretted that the author did not engage upon this inquiry. He has, however, done much; and I am forcibly reminded, by the foregoing sketch of a system which betokens a mind imbued with the love of harmony and symmetry —I am reminded, I say, of the noble and commanding features of Mr. Carmichael, which men who, like myself, studied in the capital of Ireland at the period he was pursuing his useful career, will not easily forget. I need but allude to the melancholy manner in which Mr. Carmichael met his death, to excite your liveliest sympathy.

Without leaving the fertile Hibernian soil, we pass on to Wallace, whose work appeared some years after Mr. Carmichael's. The conception which Wallace formed of syphilis shows a tendency to return to a belief in the unicity of the virus. Being, like Abernethy, surrounded by cases presenting a considerable variety of symptoms referrible to sexual intercourse, he was at first likewise perplexed; but he did not allow himself to be carried away by the physiological school which Broussais was heading in France, and according to whom it was a mistaken notion to admit the existence of any syphilitic virus. Wallace hoped he had found the solution of the intricate problem, by noting the more or less regular *action* of sores. The ulcer which destroyed the tissues neither too much nor too little was made *the type;* the others, degenerations from this type. We shall see, hereafter, that at the present time in France, a system somewhat analogous has been put forward by M. Clerc. But we ought in justice, to allow Wallace, who, I am sorry to say was prevented by death from completing his labours, to say a few words for himself. Here is his analogical reasoning (p. 57):—

"The inoculation of the vaccine poison, like that of the venereal poison, produces numerous varieties of disease; yet we are in the habit of affirming that one of these varieties deserves to be considered, in preference to the others, as the regular or legitimate vaccine disease. Should not the same law hold in regard to syphilis, which is, like vaccinia, produced by a morbid poison?....The venereal disease," the author goes on to say, "which is the original type or specific form, and of which all the other forms are viewed as degenerations, presents, when compared with these supposed degenerations the following characters. It exhibits, in a combined and perfect state, and in a medium degree, that series of destructive and restorative actions which are exhibited by the other forms of the same disease, in an irregular manner, and without any defined proportions. From it, as from a centre, the varieties branch out on either side, gradually decreasing in severity of destructive action, until they arrive at that state of disease which consists in a morbid secretion without ulceration; and, on the other hand, gradually increase in severity, until they lapse into those forms of disease, which exhibit the most malignant ulceration or gangrene....There is a form of venereal eruption or constitutional disease, which,.... as compared with other constitutional venereal eruptions, should be considered the legitimate form, upon the same principles that a certain form of primary disease is here considered to be the legitimate form. Thus all the degenerate forms of primary syphilis will be found referrible to two divisions; those of the first division being characterized principally by irregularity in the processes of ulceration or destruction, and those of the second by irregularity in the process of reparation. The former division is composed of three varieties: in the first, the destructive process is in excess—phagedænic primary syphilis; in the second, the same process is deficient—superficial primary syphilis; and in the third it is wanting—catarrhal primary syphilis. The second division has three varieties; the first is characterized by excess of interstitial deposition at the base of the ulcer—indurated primary syphilis; the second, by the same excess at the circumference of the ulcer—annular primary syphilis; and the third by an excess of granulation or deposition on the surface of the diseased part—fungous primary syphilis."

Now it cannot be denied that these forms have a real existence; we have all seen them, and many of us will, perhaps, be inclined to look upon the classification as ingenious; but Wallace erroneously connects *all these forms* with secondary eruptions (there being, however, according to him, one legitimate eruption only, as there is but one legitimate primary sore). He is therefore led, most unfortunately, to give mercury in all, even in the catarrhal form. He falls into error respecting the hard chancre and warts, and is driven, having once attempted a classification, to multiply his sub-varieties, when treating of each of the six degenerations in particular. He gives us, in fact, an example of a practical man explaining the pathological phenomena he has seen, in a curious, but completely erroneous manner.

At length we had, in 1838, Ricord's book on inoculation, and right cleverly did this champion of the unicity of the virus defend his cause. I have already said how he was led to admit but one syphilitic poison; but he went further. He showed that this poison was a complete stranger to gonorrhœa proper; that it became weakened in the secondary manifestations; that its action on the lymphatic glands was an indication of its being likely to infect the organism or not; that it almost certainly contaminated the economy when it gave rise to an ulcer with an indurated base; that the constitutional symptoms it excited presented a regular succession when no treatment intervened; that these symptoms might be combated with mercury in their earlier, and with iodide of potassium in their later forms; that syphilis enters the economy by means of the vehicle carrying the primary virus, and not the secondary or weak; and that the action of the disease generated by this virus is to proceed, when constitutionally established, from without inwards, even to the viscera.

These doctrines were not received without discussion either on the Continent or in this country; but they have certainly exercised a most marked influence on the treatment of venereal diseases all over the globe. Ricord's system stands now, in spite of a great many attacks, a handsome edifice, as remarkable for harmony and symmetry of form as for the valuable practical applications which it inculcates.

Yet, as I stated before, it remained a source of embarrassment, that of two primary sores, possessing the same faculty of physiological or artificial reproduction, one, with a hard base, should almost invariably be connected with indurated inguinal glands, and the contamination of the organism; and the other, with a soft base, should, in most cases, cause suppurating bubo, or, indeed, an inguinal chancre, and leave the organism unscathed. Could the same virus produce such widely-different effects? Ricord answered, that some constitutions resisted, and others not; though, as I had occasion to mention a few minutes ago, he *suspected* the cause might be in the virus.

One of his pupils, however, M. Bassereau, who, in 1852, published an excellent book on syphilitic eruptions, considered that differences as to constitution, mode of life, sex, age, and climate, had nothing to do with the development of constitutional syphilis or its non-appearance. From a large number of cases collected at the Paris Lock Hospital, he took one hundred who had suffered constitutionally after chancre; and an equal number who had not so suffered, and had, moreover, had no treatment capable of warding off systemic syphilis; and found in these two series of cases about the same proportion of lymphatic temperaments, weak frames, bad hygiene, &c. He took into particular account the fact that the same person may, at short intervals, take first a soft then a hard chancre, and also that patients have been known to present soft chancres successively through a certain number of years, and to contract at last an infecting sore which contaminated the economy. The cause of the infecting nature of some chancres (as regards the organism at large), and the non-infecting nature of others, could, with such data, not be believed to depend on age, sex, idiosyncrasies, temperaments, constitutions, modes of living, seasons, or intercurrent affections. In order to discover this cause, he thought of confronting the person infected with the individual who had been the source of the contagion, and found that all those patients who presented chancres followed by constitutional symptoms, had taken the disease from persons affected exactly in the same manner. He also observed, by another series of comparisons, that individuals suffering from chancres which had remained local symptoms, and had not infected the economy, had been diseased by persons with whom the chancres had also left the organism untouched.

From these facts, M. Bassereau was led to suspect that the cause sought for might lie in the virus itself. With much propriety, and the usual humility of true merit, he refrained from jumping at a conclusion, and would not at once, as the lawyers would say, make the rule absolute, but he gave the results of his investigations as very good grounds for admitting the duality of the syphilitic poison. One poison, by whichever name it may be called, producing local symptoms only; the other, for which the appellation of syphilitic might, perhaps, exclusively be retained (as I have already stated), giving rise, besides the local manifestation, to infection of the whole economy. The series of cases observed, showed that one kind of chancre was not capable of generating the other; hence the author was justified in suspecting a duality, until facts were brought forward which proved that a soft chancre can produce a hard one, and *vice versa.*

Not content with these clinical data (which have since been wonderfully multiplied by subsequent inquirers), we find M. Bassereau seeking support in the *history* of the syphilitic disease, in spite of the scantiness of reliable records. He thinks that he has made out that we may partially believe in the ancient origin of the disease—that is to say, as regards the chancre which remains local, and does not infect the organism. The chancre which taints the frame only appeared at the epidemic of 1495, and from that period were those fearful constitutional symptoms observed which are rife up to the present moment. The soft chancre, M. Bassereau believes, is as old as the world; the hard, with its dismal train, began its reign, and that in the most ruthless way, towards the close of the fifteenth century.

But how is it that these two kinds of sores were subsequently confounded? The author holds that the earlier writers (and he is certainly very precise in his quotations), such as Marcellus Cumanus, John Vigo, Benedictus, Fracastorius, and others, knew the distinction between the old and new chancre, the one going by the name of *caries non-gallica*, the other being called *caries gallica;* some of these writers even describing the hard base of the latter, and its not being followed by bubo. But the physicians, who wrote afterwards, began to confound the two kinds, seeing that the starting point was the same; and Vella and Brassavolus are considered as having been principally instrumental in the spreading of the error. The confusion became soon so great that Fallopius considered the disease as presenting Protean forms, appearing now in the shape of a urethral discharge, now as an ulcer, now as a bubo, and now as an affection implicating the whole of the frame. In modern times, however, we find various attempts (of which I have had the honour of pointing out a few) at dispelling the confusion; and we have at last Ricord, who clearly distinguishes gonorrhœa from syphilis, points out the innocent nature of the soft chancre; and, finally, M. Bassereau, who ascribes a different nature to the virus which generates the soft, and the virus which generates the hard chancre.

Another specialist of Paris, M. Clerc, also a pupil of Ricord, is likewise a supporter of duality; but instead of holding that the soft chancre had existed from the beginning of the world, and that the hard was first observed at the time of the epidemic, he considers that both kinds are posterior to that epidemic, and that the soft is a *degeneration* from the hard. (We are here reminded of Wallace.) M. Clerc thinks, in fact, that the *chancroid* (as he calls the soft chancre) is the result of the implantation of the pus of hard chancre upon a previously syphilitic individual.

But a fatal objection to this view is, that this *chancroid*, when communicated from an already syphilitic individual to an untainted person, will develop upon the latter in the shape, not of a *soft*, but of a *hard* chancre, and infect the economy.

Struck by the logical manner in which M. Bassereau had conducted his investigations, and by the value of his clinical facts, several specialists of France undertook to control the new doctrine by the same system of confrontation which had been adopted by its author. The latter had succeeded seventy-five times out of seventy-eight confrontations in showing that constitutional syphilis had existed both in the infecting person and the individual infected. M. Clerc of Paris was just as fortunate in seven cases. M. Diday, a distinguished specialist, M. Rodet, and M. Rollet, all successively surgeons of the Lock Hospital of Lyons (these gentlemen are elected by competition, and remain only six years in office), have instituted similar confrontations, and published numerous cases all corroborating the doctrine of duality.

Ricord could not, of course, remain idle in this general stir made about a very important point of his system; and he began to institute inquiries of the same kind. (I should here state that the control exercised in Paris over a certain class of women, the obligation imposed upon them of repairing to a given hospital when diseased, and the large size of both the male and the female Lock institutions, render confrontations practicable in Paris. You at once see that we have no facilities of the kind in London, and that such confrontations can be obtained in this country but on a very limited scale.) Ricord had, in these investigations, a very great advantage; he secured, as assistant, an extremely active and intelligent interne, or house surgeon, M. Fournier, who has lately published a book on the subject, and who carried on the examinations with the utmost zeal and perseverance. It cannot, however, be denied that such confrontations must be made with the utmost caution, and that the sources of error are numerous. Amongst the number I may mention the following: Deceit or unwillingness on the part of patients; promiscuous intercourse in a limited interval; mistakes as to whether the professed or the concealed harlot has been the source of the disease; chancres which escape the notice of patients; a soft chancre springing up on the cicatrix of an old indurated one; a soft chancre observed upon a person previously infected with syphilis, which chancre may implant actual syphilis on an individual who had never been diseased, &c. &c. These are certainly great obstacles in the way of obtaining reliable cases of confrontation; but we are told by Ricord that due regard has been paid to all these sources of error, and doubtful cases entirely rejected.

There is certainly a less circuitous manner of arriving at a solution; but the experiments are not justifiable. They would consist in inoculating a given number of healthy persons with pus from soft chancres, and another similar number with pus from hard chancres, already accompanied by constitutional symptoms, and watch the results. But as this is impossible, we must be content to observe the phenomena of ordinary contagion, and guard against error. The confrontations directed by Ricord and carried out by M. Fournier, may be divided into the following groups:—

1. Transmission of simple chancre, with its original aspect, from one untainted subject to another, also previously untainted.

2. Transmission of simple chancre, with its original aspect, from an untainted subject to one already infected with syphilis.

3. Transmission of soft chancre affecting syphilitic individuals, in the shape of soft chancre, and not producing constitutional symptoms upon the recipient.

4. Transmission of soft chancre affecting syphilitic individuals, in the shape of hard chancre, followed by systemic syphilis.

5. Transmission of hard chancre upon previously untainted subjects.

6. Transmission of hard chancre upon individuals already infected with syphilis in the shape of soft chancre, and presenting all the characters of the latter.

Now the cases which these groups include, and which I cannot of course quote here, are extremely curious; the patients being respectively watched, examined, and interrogated at the male and female Locks. No trouble was spared to discover the women who had been the source of contamination, and it is obvious that the amount of labour must have been very great. But, as I said before, the inquirers were greatly aided by the police regulation of the French capital. Indeed, I recollect a fact related to me by a patient at the German Hospital, Dalston, which illustrates, in a rather amusing way, the stringency of these regulations.

The man had lately been a patient at Ricord's hospital, and had been closely questioned as to the source whence he took the complaint. He could not tell the address, and the woman was not discovered at the female Lock. Soon after leaving the hospital, and having quite recovered, he met the lady in the street, and entered into conversation with her. They walked together until they came in front of a guard-house, where he gave her in custody. She was soon examined by the surgeon appointed for the purpose, found diseased, and sent to the Lock. Information was given to M. Ricord's house-surgeon, and the case completed.

The groups to which I have just alluded, contain 102 cases, amongst which the transmission of the hard chancre occurred 59 times. In casting up the cases of confrontation from *all sources*, we find that undoubted cases, given by men of the most reliable honesty, already reach the number of 137. These refer chiefly to confrontations where indurated chancre was transmitted, and secondary symptoms occurred in both individuals.

I have endeavoured to add a few from my own practice, both public and private; they are but few, yet nevertheless valuable. One is an example of transmission of soft chancre, where the lady accused submitted to examination because she did not know, as often happens, that anything was the matter with her. She had on the cervix the identical kind of chancre which the patient presented on the corona. The chancres were soft in both individuals, and no general symptoms occurred in the gentleman for years afterwards. I have noted five remarkable cases where I had the advantage of seeing and treating both parties for a long time. In these confrontations there were four married couples, the wives being infected by their husbands. There was no concealment, and it was plain that the infecting chancre had, in all these cases, produced its like. The details are extremely curious, but I may not quote them here; suffice it to say, that a certain amount of similarity was noticed in the constitutional symptoms of the respective couples, and that there was childbearing, in four cases, after the full development of the disease. One of the women gave birth to a child, which has now reached the age of nineteen months without a blemish; another was confined twice, and gave birth, at the full time, and at the interval of a twelvemonth, to dead children; the third was prematurely delivered, at seven months, of a dead child; and the fourth had a miscarriage at four months.

It is plain, that if we admit the doctrine of duality, on which I have just dilated, we may do so without infringing upon the unicity of the *syphilitic* poison; because, from all we have said, it would appear that there seems to be a duality of *chancrous* poison, but that there is but one actual *syphilitic* virus capable of infecting the economy. We, therefore, find that Ricord may side with his pupil without interfering with any of the tenets he has hitherto been maintaining. He has, indeed, given in his adhesion, but in a somewhat guarded manner, and he is, perhaps, right, as certain points are not, as yet, perfectly elucidated. Amongst these, is the fact of soft chancres being rarely, or never, found in the cephalic region; about the head and face the chancres are always of the hard kind; and yet, it may fairly be supposed that the region in question may occasionally come in contact with pus derived from a soft chancre. M. Diday has attempted to explain this, by saying that soft chancre does not take on the head, just as scabies is known to shun the cephalic portion of the body. But it must finally be confessed that the evidence in favour of a duality of *chancrous* virus is overwhelming, and that it is very probable that much time will not pass before it is admitted by the whole profession. The unicity of the syphilitic virus remains, however, unshaken, and though the treatment hitherto adopted to combat the results of both poisons will not require any modification, the doctrine will afford considerable aid in diagnosis and prognosis, and elucidate certain points of forensic medicine.

I, therefore, have no doubt that you will heartily join me when I say that much praise is due—First, to the originator of the doctrine, and then to the inquirers who, by collecting facts, have given an undoubted value to an important improvement in the pathology of syphilis.

LECTURE II.

ON SOME PECULIARITIES OF CERTAIN CONSTITUTIONAL SYMPTOMS OF SYPHILIS, AND ON THE NON-CONTAGIOUS NATURE OF THE WHOLE SERIES.

Average of the time which separates the primary symptom from the eruption.—Simplified classification.—Value of the copper-colour and the absence of pruritus.—Condylomata, vel mucous tubercles, vel muco-cutaneous papules.—Secondary and tertiary syphilitic ulcers.—The non-contagious nature of the secondary and tertiary groups of symptoms.

Mr. President and Gentlemen,—When I had last the honour of addressing you, we were occupied with a doctrinal question of some importance—viz., whether we should admit a unity or duality of the syphilitic poison. The result of our inquiry was, that the doctrine of duality bids fair to become firmly established, but that its adoption does not upset any of the tenets which have been upheld by Ricord. We may, in fact, believe that the poison of soft chancre is different from that of the indurated chancre (which latter is the precursor of systemic syphilis); and we thus have a duality, not of the *syphilitic*, but of the *chancrous* poison—one harmless, the other harmful; one confining its effects to the locality where it springs up, the other producing a modification of the tendencies of the organism; one inoculating the nearest lymphatic vessels or glands, the other charging them with a peculiar morbid exudation; one suppurating freely, the other scantily; one presenting a soft, the other a hard base; one very liable to phagedæna, the other not.

This duality teaches us nothing new, but the investigations which were instituted to test the truth of the doctrine have confirmed the great fact, that these two kinds of chancres are propagated with their peculiar characters, and that there is no crossing of species. We also have proofs that the soft and hard chancres are transmitted to an individual, previously infected with systemic syphilis, in the shape of the *simple or soft chancre;* but that the character of the virus of the hard chancre is so decidedly peculiar, that when this previously syphilitic person transmits the pus of his *soft* chancre to an *untainted* subject, the latter will be affected with *hard* chancre and its sequelæ. In fact, the hard chancre can no longer develop upon an already tainted person; but the latter may become, if he exposes himself to the contagion of hard chancre, a kind of receptacle of the actual syphilitic virus, which he may convey to previously healthy individuals, and infect them with syphilis. Cases in support have been published, especially by M. Robert, of Marseilles.

This transplantation has been observed upon animals on which experiments were made. Pus of hard chancre was forced, by repeated irritation and scraping, to lodge and flourish under the epidermis of a monkey. The latter presented, however, no systemic syphilis, because animals are insusceptible of the constitutional affection; but the pus retained its properties, and being inoculated upon Dr. Welz, a German physician, gave rise to hard chancre, followed by the symptoms of systemic syphilis.

Not only, however, do questions of doctrine present some difficulties in this disease, but perplexities continue when we come to observe the material manifestations of this sad complaint. I have, therefore, thought we might usefully occupy a few moments this evening in considering, 1st, the present state of our knowledge respecting eruptions; 2nd, the mechanism connected with the production of the constitutional syphilitic ulcer; and, 3rd, the non-transmissibility of the symptoms of systemic syphilis.

The first manifestations which we generally remark, when the organism is infected, are eruptions on the skin and mucous membrane subsequently to a variable degree of feverish symptoms, and an uncertain lapse of time after the appearance of the indurated sore. Now, these eruptions are extremely valuable signs of the infection of the system; and all observers who have given attention to this disease have felt the desire of ascertaining the mean of the time which separates the evolution of the primary symptom from the eruption; and have, moreover, tried to classify the manifestations of the skin, not only as regards their material form, but likewise respecting the cutaneous consequences of the eruptions. Before treating these two subjects, let us say a word of the fever or *initiatory* phenomena.

You may safely take it as granted, as far as my own observation goes, that these have hardly any existence. It is true that ancient and modern authors have described symptoms ushering in the eruptions nearly akin to those which precede the exanthemata; but when we look at actual practice, we find that, in the vast majority of cases, the eruption appears without any warning, and that patients are taken quite unawares; nay, it has often happened to me to direct their attention to cutaneous symptoms with the existence of which they were quite unacquainted. Frequently, whilst exerting my powers of diagnosis upon a chancre presenting induration, I felt a doubt, and asked to examine the groins; and, in doing so, I discovered upon the abdomen either a rash or a crop of papules, which the patient had not seen, and which, of course, left no longer any hesitation as to diagnosis. Struck by these facts, I made it a rule, for a long period, to ask each individual affected with eruptions, what had been his sensations previously to their appearing, and almost invariably was I told that no particular uneasiness had been felt.

This is decidedly the rule; but I have met with exceptions. One patient, of mature age, who suffered from gangrene about the glans by excess of inflammation, and had been much weakened by this process, felt languid and listless a few days before the appearance of papules on the skin. Two other patients, one with a rash, and the other with papules, were attacked, a few days before the eruption, with very severe pain between the angle of the scapula and the spine. One of them suffered so much that I ordered mustard poultices to the spot; and the other's respiration was so seriously interfered with by the pain that I was misled, and ordered leeches, fearing pleurisy. These cases are the only ones of the kind I can recollect; and I am now firmly of opinion that a great modification has, as to initiatory fever, taken place since the time of Hunter. I do not even meet with the flying pains in the bones so much dwelt upon by Ricord.

The rule also holds good in those cases where the eruption is at once pustular. Such an eruption is certainly rare as a first systemic manifestation; but I have had two cases under my care which presented this peculiarity. One patient became, soon after the appearance of the primary sore, so covered with pustules, that he looked like a living illustration of the cutaneous syphilis of the great epidemic; the other jumped, without any intervening symptoms, from chancre to rupia, but neither seemed to have had a trace of initiatory fever. True, they both became subsequently very weak and low, and I was certainly at one time afraid about the issue; but the debility was caused by the severity of the eruption, and might be compared to cancerous cachexia, which, if I do not mistake, is the result more of the exhausting effects of suppuration and irritation than of the blood disease itself. But it is especially in those cases where the tonsils become suddenly ulcerated that the absence of flying pains and initiatory fever is striking. I have seen many patients who became aware of the existence of such ulcers but by pain on swallowing. A few papules may, in some cases, be detected here and there; but instances are not unfrequent where no cutaneous manifestations accompany the ulceration of the tonsil, and where the latter occurs suddenly without the least general disturbance. The knowledge of these circumstances may aid us in our diagnosis when consulted respecting doubtful cases; for a line is at once drawn between certain syphilitic eruptions and the exanthemata.

Now, as to the question of the time which separates the primary sore from the eruption, it must be confessed that much labour has been bestowed on it, as it was hoped that we might perhaps arrive at such fixed rules as have been discovered for the exanthemata. Success has not been complete; but we know enough to form a pretty accurate prognosis.

The tables which have been offered by some authors are not quite satisfactory, because they make no distinction of sex, and because the influence of treatment is not sufficiently taken into account. As to the sex, I have found that the general symptoms appear more rapidly in women than in men, so that statistics of this kind should be drawn up for each sex in particular; and as to the effect of the treatment, it would be important to specify how long the mercurial course had been persevered in.

It is but seldom that we have opportunities of studying the natural history of this disease,—viz., when no treatment whatever has intervened; yet this is the only foundation upon which we should attempt to answer the question at issue. I find, however, in my male cases nine individuals who presented eruptions, and had not undergone any treatment whatsoever. In three cases of papules, the eruption in one appeared *seven weeks* after the primary symptom; in the other, the interval had been *six weeks*; and in the last, *eight weeks*. Two cases of roseola or efflorescence appeared, one *twenty-four days* after the occurrence of the chancre, and the other, *one month*. (With the latter case, however, mercurial pills had been taken for a week when the roseola broke out; and the patient, of course, did not fail to accuse the pills of having brought the eruption upon him.) Psoriasis appeared in two subjects at the distance of *four* and *eight weeks*. So that we may, regardless of the *kind* of eruption, reckon a mean of six weeks where no treatment has been resorted to.

As to the muco-cutaneous papules of women, *alias* condylomata, they will frequently appear a *fortnight* or *three weeks* after the primary sore. But we can seldom accurately appreciate the period; as, with women, an opportunity of seeing the primary symptom is rarely offered. Neither loose women, nor wives who have been infected by their husbands, seek medical relief for ulcers of the indurated kind; because the sores are mostly concealed in the vagina, and do not give rise to troublesome buboes. Yet, recently I had under my care a girl presenting a large indurated chancre on the right labium, with a wreath of muco-cutaneous papules around the anus. Age of the chancre, six weeks; of the papules, three. No treatment.

I do not purpose at present entering upon the influence of therapeutical measures; but I shall just state that mercury, when it does not prevent the evolution of cutaneous symptoms, certainly retards their appearance. I find in my cases much difference as to the length of time mercury may keep off the eruptions, and I notice in some cases that the usual succession of symptoms was inverted.

I shall not detain you with any observations respecting the acute or chronic nature of the eruptions. Strictly speaking, and considering merely the time during which the cutaneous manifestations may remain visible, they are all chronic, except erythema, which is found to fade very rapidly. If we take into account the whole period in which an individual may remain subject to the disease, the words "acute" and "chronic" are no longer applicable: nor can we say that eruptions are early or late, because erythema, which generally appears early, may break out again when a pustular eruption, which is mostly seen late, has faded away. For practical purposes, we may take the following succession as the most frequently observed: erythema, papules, vesicles, pustules. The two former are observed in the greater number of cases.

Having now disposed of the question of time, and confining our attention completely to eruptions on the skin, we come to consider whether it is useful to classify them. On the first blush of the matter, such an endeavour seems useless; for we have but one remedy to combat them all, or nearly all, and therefore it seems more rational to find simply the means of ascertaining whether an eruption is syphilitic or not. If syphilitic, the remedy is at hand; if not, the inquiry becomes easier by the exclusion of syphilis. But such short work is not sufficient; we are obliged to study forms, because the syphilitic manifestations of the skin present themselves with characters closely resembling the simple eruptions. The generally-adopted names of these force themselves upon us, and we are constrained to submit to a *comparative* classification. Yet we may strive to avoid the confusion which arises from a multiplicity of orders, genera, species, and varieties.

In practice, I hold that it is sufficient to deal with orders; and when the syphilitic character has been clearly ascertained, we may safely neglect the hard words which dermatologists have been pleased to coin. I would propose to limit these orders to a very few, which the drawings before you beautifully illustrate: Erythema, Papules, Vesicles, Pustules. These four seem to me quite sufficient. Let us see the syphilitic value of some genera. What is papular erythema but an eruption differing but little from erythema proper? What is psoriasis syphilitica but confluent scaly papules more or less flattened, or a scaly permanent erythema? Is the difference between herpes and eczema so great as to prevent us from simply calling them a vesicular syphilitic eruption? What is the tubercular eruption so often mentioned, but large papules developed in the cutis vera? Tubercles, however, differ from papules in one respect. The former are very liable to ulcerate, the latter hardly ever run into ulceration. And as to bullæ, we must not let them trouble us at all. Few of us have seen them in their original early form, except in tainted infants. I know I have not, but I have often noticed the so-called rupia (which is said to owe its existence to a bulla) taking its rise from a large pustule. Let us quietly simplify the study of syphilitic eruptions, and be content with our four orders; they will suffice for the purposes of diagnosis and treatment. Nay, if we be seized with the enthusiasm for simplification, we may reduce the four classes to *one*, marked with a few stages. I beg you to note that all the eruptions we are considering are driven on the skin by the same poison; it is the same pox which in one patient excites erythema, and pustules in another, or which calls forth these two eruptions in the same patient at different periods. The skin is the seat of the morbid process, and the papillæ and cutaneous glands will be influenced according to the state of health of the patient, his age, his susceptibility, and the treatment he has undergone. Erythema gradually passes into papules (we need not affix a name to each little gradation, and herewith clog our progress); papules may become slightly irritated, and secrete serum; we have then vesicles, and the irritation may be considerable enough to cause the formation of pus, which latter is then the result of *bonâ fide* inflammation, and then we have to deal with pustules. If one class only can thus be shown to be sufficient, four will *à fortiori* be abundance.

From the preceding considerations, it will become evident that the common term of scaly diseases is not practically correct, for erythema and papules (the former being a simple congestion of the papillæ, the latter a regular enlargement and hypertrophy of the papillary masses) disturb the secretion of the epidermis, and will cause it to be cast off in scales, the latter being more or less thick and more or less coloured with serum. In the latter case, the scales are mostly derived from vesicles, and obtain the appellation of impetiginous. The term scaly diseases is too vague, we might, however, put erythema and papules into one great division, called the *deciduous* as the epidermis is frequently cast off; and vesicles and pustules into another great division, called the *secreting*.

But here we are struck by a great fact. Some cutaneous affections are noticed to have a tendency to destroy epidermis, rete mucosum, cutis vera, and all the beautiful secreting apparatus contained in the latter, and, in fact, of running into ulceration; others have no such tendency; and it just happens that erythema and papules belong to the latter affections, and vesicles, pustules, and tubercles to the former. We can therefore, with some propriety, use as a guide for diagnosis and treatment the following table:—

First Division.	
Non-ulcerative, or deciduous.	Erythema and papules.
Second Division.	
Ulcerative, or secreting.	Vesicles, pustules, and tubercles.

I must confess my partiality for the practical lucidity which is afforded by the division into ulcerative and non-ulcerative eruptions, because ulceration denotes a considerable activity in the poison, and a want of resistance in the patient; hence, when we see the possibility of the formation of ulcers by the appearance of vesicles, pustules, or tubercles, we have made a discovery which is of paramount importance in the treatment. We are then bound to assail the poison with some energy, and to husband the strength of the patient. I may, perhaps, add, that the manner in which syphilitic ulcers are mentioned is, in general, very unsatisfactory, for sufficient attention is not paid to the manner in which the ulcer has arisen. But more of that anon.

Having said thus much respecting classification, let us now consider the diagnostic signs by which we can ascertain whether an eruption is syphilitic or not. Two characters of the syphilitic nature of cutaneous manifestations have been frequently dwelt upon—viz., the copper-colour and the absence of pruritus. I purposely leave out the *circular form*, which is sometimes mentioned, because the value of any characteristic shape is entirely restricted to ulcers, which latter we shall consider presently. Of the colour and absence of pruritus, I venture to say that the first has hardly any importance as an aid in diagnosis. It is true that papules and vesicles, when they begin to dry and die off, assume a light-brown tint, especially around the edges, but this happens so late, that, had we but this sign to rely upon, we might be forced to practise expectant medicine. As to erythema, the dark colour has still less importance, for most rashes will in a short time disapper entirely, and leave no trace of their passage, save now and then a few scales. When pustules do not run into ulcers, and the dried pus, which forms a more or less thick crust, falls off, a blotch or stain is left, which certainly presents a light-brown shade; but this, again, occurs very late. If the base of pustules goes on secreting, whilst the upper stratum is drying, the secretion takes place at the expense of the tissues on which the pustule is seated, these tissues are gradually destroyed, and *bonâ fide* ulceration takes place under the crust. But the whole of this process goes on without presenting any of the characteristic colour around the pustule. We have no assistance, except from some peculiarities of the crusts, which are said to be always black, but which I have found to vary considerably in colour. It would therefore appear that, as far as diagnosis is concerned, we must not rely much on the tint of the eruption, because the light-brown coloration is a kind of epiphenomenon, and diagnosis does not tolerate after wit.

But if we must, in some degree, give up this character, we find another, and a very trusty one, in the absence of pruritus or heat. This is very peculiar, and especially valuable when we fear confusion between syphilitic erythema and the exanthems, or between specific vesicular eruptions and itch. This absence of pruritus is, however, to be found in a few of the simple *non-specific* eruptions; but it so thoroughly pervades all the cutaneous manifestations of syphilis, that it affords considerable assistance.

I would especially call attention to the erythema which sometimes is observed in persons who are taking copaiba: here the pruritus is entirely wanting, and so puzzling are these cases sometimes, that the history of patients must be thoroughly investigated to set the possibility of a syphilitic erythema at rest. I possess about half a dozen cases of the kind: one was shown to me, the other day, by my friend Dr. Lichtenberg, at the German Hospital, where the whole body was covered with an efflorescence approaching the papular eruption; and certainly it required some care to decide upon its nature, which was, however, found non-specific. Another eruption occurred only a few days ago upon a private patient of mine, affected with gonorrhœa, and who had been taking Jozeau's saccharated capsules *only four days*. On passing the hand along the skin, the epidermis is always felt slightly raised, which circumstance is not observed in specific erythema.

No doubt we meet here and there with an exception, and find a little pruritus in *syphilitic* erythema; but then, we have the history of the case, and the lymphatic stigmata which the poison leaves upon the economy. These stigmata are, as you are aware, the indolent enlargement of the inguinal and occipital glands, and sometimes a few others about the arms and neck. This congested state of the glands is especially valuable with females; for with them, all trace of primaries may long have been destroyed, whilst the groins tell the tale, and disclose to the attentive observer the nature of the eruption. With men, some induration may be left on the seat of the primary sore; the inguinal glands are generally distinct, and the occipital glands very often enlarged; the efforts at diagnosis, therefore, are more frequently successful. Yet, on the female side, there is, as I stated a few minutes ago, an early evolution of certain hypertrophied papules on the labia and around the anus, which at once stamps the case. These papules, which I have proposed to call muco-cutaneous, as they spring from a surface which has a muco-cutaneous character, are well worth a few remarks (now that we have done considering the value of the copper colour and pruritus), as some misconceptions respecting them are still prevalent amongst us.

Ricord calls them mucous or flat tubercles, and this term is no doubt correct; but I cannot help thinking that much confusion arises from using the word "tubercle" too frequently. There is the *tubercular* eruption (which I have blended with the papular); there are the deep *tubercles* (a tertiary symptom); and there are, independently of syphilis, the *tubercles* which are found in the lungs and other organs of consumptive patients. Hence I may conclude that some obscurity will be avoided by calling the pathological appearances we are now considering "large *muco-cutaneous papules*."

That these large papules should long have been looked upon as primary manifestations, and should even now be held as such by experienced men, can hardly be wondered at: for they are sometimes the only syphilitic symptoms presented by the patient; they may be the first morbid signs observed by the sufferers; they spring up in those regions which are the most exposed to danger in the usual mechanism of contamination; and they secrete purulent matter which might be looked upon as infectious. But, in spite of these characters, the papules in question may easily be shown to be wanting in the properties of primary sores, and to belong to the *systemic* symptoms of the disease.

Hardly any surprise need be felt at the error which has prevailed respecting these so-called condylomata; for we all know that a similar confusion has existed in other departments of pathology. Scarlatina was at one time confounded with measles; bronchitis with pneumonia; iritis with corneitis; pericarditis with endocarditis; typhoid fever with typhus; and hysteria with epilepsy. Observation has led to the collection of clinical facts; and these prove that these hypertrophied papules are not conveyed by actual sexual intercourse, nor by close and habitual contact, whilst chancres are known to produce their like by sexual congress. From such facts, the tendency arose of concluding that the papules, in spite of the circumstances to which I just alluded, did not present the properties of primary symptoms. This was very simple reasoning. Then came experimentation, which proved that the primary sore could again and again be propagated by artificial inoculation upon the individual affected; whilst muco-cutaneous papules could not be multiplied in the same manner. We are thus driven to admit that these papules have none of the characters peculiar to primary sores, and that they must be classed amongst the secondary symptoms of syphilis. To carry conviction into your minds, I will endeavour to sift the matter a little farther.

And first, one source of fallacy is, as I said before, that these large papules are sometimes the only syphilitic symptoms found on the patient. And why? Because the eruption, in the shape of erythema or papules, has already withered, and has not been noticed by the patient. Or the eruption may be so slight as to escape attention altogether. And even were the eruption completely wanting, it should be remembered that it may be concentrated in the vulvar, perineal, and anal regions, owing to the heat, moisture, and friction, which in some degree attract it to those localities. Allow me to mention a case of some analogical value.

I have now under my care, at the Royal Free Hospital, a girl suffering from a confluent papular eruption, with thick scales. She has had several relapses during the last three years, and has presented partial aphonia all the time. I ordered, a few days ago, blisters on the sides of the neck, to try derivation. On the blistered surface, confluent papules subsequently arose, exactly similar to those already existing on other portions of the body. This occurred, very probably, on account of the local excitement. But traces of a general eruption are seldom wanting; we need but carefully examine the patients, and we almost always find ordinary papules scattered here and there; at least, I have treated many cases which clearly illustrate this fact.

A second source of error is, that the muco-cutaneous papules are not unfrequently the first morbid signs observed by the sufferers. They are the first noticed, because they prove very inconvenient as regards sexual intercourse; and because they interfere with the carrying on of an unfortunate pursuit. Scattered papules, ulceration of the tonsils, loss of hair, enlarged inguinal glands are disregarded; these blemishes may be concealed, pain is combated, and the victim struggles with the disease, in order to avoid struggling with want. But the morbid influence gradually becomes more and more manifest in the regions which are, in more than one manner, irritated and excited; isolated large papules arise on the labia, they soon coalesce, intemperance and uncleanliness do their best, inflammation, œdema, and a fœtid secretion put a stop to all attempts at concealment, and the unhappy outcast is constrained to seek refuge in the wards of an hospital. Nay, in writing down the histories of such cases from the lips of the patients, I have ascertained that the poor creatures hold out very long, and that intercourse does actually take place while the organs engaged are in the pathological condition which I have attempted to describe.

Again it has been urged, in favour of the primary nature of these symptoms, that they appear almost exclusively on the parts of generation. This is, however, only partially true, for I have seen them in the axillæ and the upper part of the thighs; but granting the fact as regards women, we may at once ask why men, who certainly are in many instances instrumental in the propagation of the disease, do not present such papules on the regions immediately concerned in coïtu? If the papules were primary and easily-communicable symptoms, we ought to see them in both sexes in the same localities. I need hardly say that they are rarely observed with men. I possess several cases, however, where these papules had developed on the scrotum and verge of the anus in men suffering from systemic syphilis, and presenting other cutaneous symptoms. These were almost always individuals of fair and delicate skin.

Now, as to the matter which these papules sometimes secrete, and which might be suspected to be infectious, I have to remind you that, in ordinary circumstances, the papules are almost dry; that when irritated they discharge a semi-mucous and very offensive fluid; and, lastly, that they secrete pus when inflamed. I have tried, by innoculation, upon the patients themselves, the two kinds of fluid, and always with negative results. We may therefore rest satisfied that the papules are not contagious in the manner of chancre, as this latter kind of sore may be again and again reproduced on the same person. And, finally, if it be taken into account that, in almost all the cases in which the muco-cutaneous papules are seen upon the regions before mentioned, there is about the body some other symptom distinctly proving the infected state of the woman's system, we are driven to consider those papules as *bonâ fide* secondary, and we frame our treatment accordingly.*

Before offering a word on the treatment of these manifestations, I would just say that some surgeons have been led to judge very harshly of male patients who present large muco-cutaneous papules about the anus. Such patients have been simply accused of lending themselves to unnatural practices, the papules being looked upon as the results of direct contagion. From the remarks I have made on the pathology of these papules, it is plain that this view is unsound, and extremely unfair to the patients.

If I may, then, assume that muco-cutaneous papules are symptoms depending on the infected state of the economy, the treatment will include the administration of mercury. As to local applications, I need not mention the lotions with a weakened solution of hypochlorite of soda, followed by calomel dusting, as recommended by Ricord as I have frequently dwelt on this mode of treatment before. I have now accumulated a considerable number of cases which prove that this application (preceded by poultices if there be much inflammation and irritation), free cauterization with nitrate of silver, and the internal use of mercury, are most efficacious.

As these papules are very apt to vegetate, I have been obliged, in several instances, to use potassa fusa, or the knife. But I can hardly agree with those who practise excision as a rule, whether the papules are fungating or not: you might as well snip off all the papules which spring up in other parts of the body. Still, I cannot object to such caustics as are likely to promote the rapid drying and casting off of these growths, which latter should at all times be carefully distinguished from simple *unsyphilitic* vegetations. Such i an ointment which I saw Dr. Weber use at th German Hospital. I prescribed it in the case o a man whose scrotum and upper part of the thighs were thickly studded with muco-cutaneous papules. After a few applications, the latter became dry and horny, fell off, and left a surface denuded of cutis, which healed very rapidly. The ointment is composed of two drachms of calomel, the same quantity of sulphate or oxide of zinc, and one ounce of axunge. Dr. Weber uses the oxide, and Dr. Lichtenberg the sulphate. Both compounds answer well, and I have reason to be satisfied with the trials I have since made of the ointment at the Royal Free Hospital.

But here I must express my regret that the treatment of these manifestations, as also of syphilitic symptoms in general, should often, independently of the practitioner, be so lamentably incomplete. Take these very muco-cutaneous papules. As soon as, by local applications and the use of mercury, they have disappeared; as soon as the patient (I principally allude to hospita practice) is invigorated by rest and good diet, she insists upon leaving the institution; and scarcely has she departed, than all idea of further treatment is abandoned. It is also very difficult to make private patients understand that the mercurial course should be persevered in long after the cutaneous symptoms have disappeared. The consequence of this state of things is, that relapses are the rule, and that practice thereby becomes in several respects, very unsatisfactory. This is extremely unfortunate, as females have to be admitted again and again, and must submit to great suffering, and to the administration of more mercury than would have been necessary for a regular course.

It is astonishing how frequently the muco-cutaneous papules of which I have spoken, are met with in the venereal wards of public institutions I may say, as far as the Royal Free Hospital i concerned, that very few female patients are admitted into the ward set apart for venereal complaints who do not present a crop of them. Th holds good of my colleagues' patients as well of my own. A peculiarity of these muco-cut neous papules which should be noticed is, th they never go over into ulceration, except th are subjected to an extraordinary amount of ir tation. Other forms of eruption are, on the co trary, as shown in the table, very liable to und go ulceration; and we so often meet with ulc s in the syphilitic disease, that we may well spe d a few minutes in the consideration of these syn toms.

It cannot be denied that some confusion ex ts as to the due appreciation of the nature of e syphilitic ulcer, for we are told by authors t at such ulcers may be of the secondary or terti y kind; we are told that they may begin in vari s ways—viz., that they may follow vesicles, p tules, tubercles, gummy tumours, or be connect d with diseased periosteum or bone. Now t question practically is: A syphilitic ulcer being given, is it possible to decide from which form of eruption it arose? or, in other words, can a secondary ulcer be easily distinguished from a tertiary solution of continuity of the same kind? The question is not one of pure pathology, but it has its practical bearing, because mercury succeeds in the one case and iodide of potassium in the other. In attempting to answer the question, I would again call your attention to the tabular arrangement which I have proposed. Ulcers may arise from the cutaneous manifestations of my second group (the secreting or ulcerative)—viz., from vesicles, pustules, and tubercles; these are all *secondary symptoms.* Ulcers may, on the other hand, follow the deep tubercle of the cutis vera or gummy tumour, or be connected with diseased periosteum or bone. These are *tertiary symptoms.* Can these two series of ulcers be distinguished from each other? I think they can; but I have learned from practical observation, that very often we derive great advantage, in a diagnostic point of view, from other symptoms of the disease, contemporaneous with the ulcers. Let us, however, examine the appearance of the ulcers themselves and begin with vesicles. When ulceration occurs after a vesicular eruption, the solution of continuity is always very superficial, and has no tendency to destroy in depth. Secondly, pustules. The pustular eruption is very likely to give rise to a very great number of ulcers of small dimensions, like sixpences, disseminated all over the body, and having no tendency to spread. The pus dries quickly, falls very soon, and leaves an ulcerated surface of little depth, with slightly-sharp margins, and a yellowish fundus. I remember a private patient of mine who had between forty and fifty of these little ulcers upon him at the same time; they appeared a few weeks after the disappearance of an erythematous eruption. A patient at the German Hospital the other day, had more than thirty of these; they heal very nicely under mercury, and leave a whitish, depressed cicatrix. The pustules will, however, sometimes form in little groups on a large patch of inflamed surface, crusts will appear on the drying of the matter, and crescents and circles will be seen. Ulcers are perceived here and there on the falling of the crusts; but, in some places, the part heals under the crust. In some habits, the pustule will form a crust which increases in size from ulceration going on beneath it; and the crust may become very large, and leave, on falling off, a very extensive, deep, and excavated ulcer. The crust either assumes a semi-spherical shape, or increases in gradually-increased layers, taking the shape of the limpet-shell. In the first case, we are told that the case is one of deep ecthyma; in the second, we hear the names of pustulo-crustaceous ulcer and rupia; but they all belong very probably to the same pustular class; and it is but very rare in practice, to see the ulcers in their earliest stage, except in cases which present successive crops.

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* It should not be forgotten that chancres have been known to fungate when secondary symptoms broke out before the chancres were cicatrized. The latter are thus transformed into muco-cutaneous papules. This circumstance, which is well ascertained, should be taken into account whenever the nature of the papules is discussed.

Now, as to tubercles, their relation to papules is so clear that their course is sometimes perfectly similar to that of papules—viz., gradual diminution of size, slight desquamation, and final disappearance by absorption. But they differ from papules inasmuch as they may be followed by ulceration. Here, again, however, we see the family likeness of most eruptions on the skin, as the tubercle, before becoming an ulcer must inflame and secrete pus; the little abscess breaks, and the ulcer which follows has considerable resemblance with an ulcer resulting from a pustule. The difference lies in the subsequent phenomena presented by the tubercular ulcers, which, as is well known, may destroy either in surface or depth to a very alarming extent.

In this short manner, and neglecting all the minor forms, and useless species and varieties, we have done with the ulcer belonging, as to origin, to the secondary group. The mucous membranes suffer mostly at the same time, including the iris; but I desire to confine attention to the ulcers on the skin.

We now pass on to the ulcers following the deep tubercle, or the gummy tumour. Here we have, if we look at the type, the fac simile of a boil, which, on discharging its core, leaves an ulcer which spreads both in depth and surface. Very sad destruction of soft tissues will sometimes occur with these. But here, again, we seldom see the starting point; and the man who can watch such cases *ab ovo* in two or three instances out of twenty, is fortunate. We mostly have, with this kind of ulcer, concomitant symptoms of the tertiary kind, as nodes and severe pain in the joints, or periosteum of the long bones, which symptoms will be of some assistance in diagnosis. Now and then I have felt the hard edge of the tubercle around the ulcer; but the plastic matter is sometimes destroyed, and we know not whether a pustule, a common or deep tubercle, has been the starting point. It is no use indulging in descriptions which may be more or less founded upon other descriptions previously offered; but we must cope with actual cases, try our powers of diagnosis, and candidly confess our deficiencies.

I particularly remember the case of a woman infected by her husband, who rapidly passed through the whole series of secondary symptoms, and came under my care for an ulcer by the side of the tibia. It was exquisitely painful, and spread fast to the size of an ordinary saucer. I had not seen the initiatory period, and not quite satisfied as to the exact nature of the ulcer, I gave mercury, and obtained no results. I then judged that we had entered the tertiary period, the more so as the tibia was very painful, a circumstance which I had first attributed to the existence of the ulcer in the vicinity of the bone. I gave iodide of potassium, and had the satisfaction to see the ulcer heal rapidly, forming, as usual, a cicatrix in the shape of a purple star. I must not forget to state that, in consequence of grief and imperfect diet, the ulcer has recently broken out again, after having been healed up about a twelvemonth.

The second kind of ulceration, belonging to the tertiary period, is that which is connected with inflammation of the periosteum and bone. Here we have an ulcer which is simply the result of an abscess; and the denuded bone soon tells the whole tale. This ulceration I have noticed to be so destructive in some of these cases, that the bones of the skull or the tibia were left quite bare. I have here very good illustrations of the disease: it is worthy of remark that some of these ulcers will be less destructive after the pus of the abscess has been discharged, and will show a tendency to cicatrization in spite of the dead bone underneath.

Now let me finally indulge in a remark or two as to the rules of practice that are to be deduced from the foregoing descriptions and attempts at an easily-understood division of ulcers. It is evident that, in the tertiary form, iodide of potassium will be our sheet anchor; and as to the local applications, they will be various, the red and white precipitate taking the foremost rank. It is customary, on the other hand, when we have to deal with the ulcers falling within the secondary period, to rely upon mercury. It is well known, however, that Ricord advises to combine the mercury and the iodide of potassium for those symptoms which he calls of "transition;" viz., the deep tubercle, which is often accompanied by pains in the bones, and perhaps sarcocele. But I have been long impressed with the fact, which I have once before mentioned this evening,—viz., that whatever ulceration takes place in the syphilitic disease, it seems to be a proof of the activity of the poison, and of a want of resistance and proper stamina in the individual upon whom the disease has fastened. Hence I have given iodide of potassium in *all cases of syphilitic* ulceration, combining, however, mercury with that salt whenever the ulcer could be shown to belong to the secondary group, or when other symptoms decidedly secondary, as iritis, were present. I have in this manner succeeded in healing ulcers in numerous cases; but I am bound to add that relapses took place in many instances, simply because patients did not consent to go on with the medicine a sufficiently long time, or because they took it under unfavourable circumstances.

I have now trespassed, I am afraid, a very long time on your attention; yet I must beg permission to add a few words on the non-contagious nature of the symptoms of the secondary and tertiary group, which I have described. Already, in discussing muco-cutaneous papules, I have shown that these secondary symptoms were not communicable either by close and repeated contact in sexual intercourse, or by inoculation. I have had a lady and gentleman under my care, where the secondary affection, on the male side, in the shape of confluent flat papules and vesicular eruption, all so situated as to give the best chance of infection, produced no effect upon the lady. We do not find the papules or pustules seated on the parts of generation of women, who, in that state, do not scruple to allow men to approach them, appear on the sexual organs of those men. What we see are always primary sores or discharges. What can we infer from this? Why that the pus of secondary and tertiary ulcers has lost some of the properties of the pus secreted by primary ulcers, and right lucky is this for mankind. Who has seen a *bonâ fide* small papule, a crop of pustules, of vesicles, or scaly permanent erythema, appear on the parts of generation of men, as the sole and only symptom with which they had ever been affected? And what says inoculation? I have now practised it forty or fifty times with a view of ascertaining the effect of the pus of secondary and tertiary ulcers, and not once did I succeed in getting something or other to follow. I do not contend that a *chancre should* be the result of the inoculation; nor that a given ulcer should exactly generate its like. I only want *some manifestation or other* to show that the vehicle contains some kind of more or less weakened poison. But the results are always completely negative.

Still, I expect an opponent to say, "Do not exult in your doctrine, for your experiment has been made upon a person already contaminated; yours is not a fair trial." Granted. But how is it that I can upon this tainted individual multiply soft chancres *ad libitum*? Is there not evidently a difference between the virus contained in the pus from the primary sore and that contained in the matter secreted by a secondary pustule? "But," says another opponent, "Waller, of Prague, has succeeded in inoculating syphilis upon a healthy child, by means of secondary pus." Now this is a serious objection. But Waller's cases, which I cannot discuss here, have been shown by Ricord to be anything but satisfactory; I will, however, take as certain, that, with secondary pus, he *did* infect the child. But how did he do it? By teasing and irritating the flesh over and over again, by bathing it in the pus for a considerable time, and since the secrets of Nature are not revealed to us, we may suppose, in the presence of such a fact, and comparing with it the mass of others where ordinary inoculation was practised, that this violent mode of feeding the system with a poison may supply the latter with an energy which it does not *actually* possess. But the important matter for us to know, is whether, in ordinary inoculation, the matter is infectious; if not, we may say that, *à fortiori*, it will not be so in sexual intercourse.

Dr. Faye, a Norwegian physician, whose experiments are mentioned in several British periodicals, did me the honour of calling upon me last summer. He seemed to me an unprejudiced, straightforward man, and he stated, that in his own hands, pus, which had over and over again proved unavailing in ordinary inoculation, at last produced some effect by scraping, bathing, and packing up the human tissues in the matter to be tried. Indeed, I am inclined to believe that, if we were to try the pus of cancer, which is well known to be uncommunicable by ordinary contact or inoculation, and force it into the system in the mani r above mentioned, we might, perhaps, obtain new and unexpected result.

A! w me finally to state, that were even a few exce ons to be unmistakably brought forward, they ould not upset the gigantic rule which has been id down by Ricord; the main truths of his doct e would still remain a magnificent proof of indo itable industry and a lofty harmonizing genius.

Clinical Lectures

ON

I JURIES OF THE HEAD.

Delivered at St. Thomas's Hospital.

By SAMUEL SOLLY, Esq., F.R.S.,

SURGEON TO THE HOSPITAL.

GENTLEMEN,—Two cases of injury to the head l ly admitted into the hospital appear to me s iciently interesting to be worthy of your se- r is attention. It enables me to continue in t se lectures this interesting subject of injury to t brain from external violence to the skull. The f t occurred a little while back, but I have not y t lectured upon it. I shall not detail it at l gth, but sketch it, I hope sufficiently clearly to l instructive.

Robert W——, a cabman, aged sixty, was ched off his box on London-bridge. He struck t ground with the top of his head. I saw him f l. When picked up he was quite unconscious. was in bed in the hospital within ten minutes er the occurrence of the accident, and within quarter of an hour I found he had so far re- vered from the concussion that he was able to t ll his name and address.

There was some bleeding from the left ear, but external laceration to account for it. I order- him five grains of calomel every six hours; the ad to be shaved, and a cold lotion applied. He ntinued in a stupid, lethargic state, but without tual coma, during the whole day, with a slow egular pulse, of no force or power. Towards ening he vomited, and his pulse became fuller. dered a common enema, and the cold lotion to l continued.

June 4th—the following morning—he was her more conscious, and the pulse softer. He nplains of pain at the top of the head, where t re is a good deal of heat. Ordered ice in a b dder to be substituted for the lotion. The l eding from the ear continues.

5th.—Head cooler, and on the whole better.

6th.—Bowels very freely opened. Calomel to b discontinued. His manner is very strange this n rning; gives wandering answers when spoken to no positive delirium, but just those slight in- di ations which made me suspect the approach of de rium tremens—*delirium ebriosorum.* The head w now tolerably cool, and the pulse soft and m erately full. It was neither the wiry pulse indicative of inflammation, nor the full, oppressed, labouring pulse accompanying cerebral effusion.

7th.—The symptoms of delirium tremens are more marked; he is more restless, wanting to get out of bed, talking of his work, &c. Taking all his symptoms together, with his previous habits of life as a cabman, I ventured to treat the case as delirium tremens, as an anæmic, not an hyperæmic, condition of the brain, notwithstanding the possibility of there being a fracture of the base of the skull. I ordered him a drachm of laudanum immediately, and ten minims of the same, with half a drachm of sal volatile, in peppermint water, every six hours. He had a better night.

8th.—The following morning, he answered all questions; recovering; the pulse continued quiet. I ordered the ice to be continued, as the head was still slightly above the temperature of the rest of the body. I ventured to give him a pint of porter.

This general plan of treatment answered, and was continued until he was discharged the hospital pretty well, though very deaf. I have seen him since, and he complains that his head is of no use to him, and that he cannot follow his occupation as a cabman. I have every reason to believe that there has been a fracture of a base of the skull in this case, notwithstanding the man's recovery as regards his bodily health.

The next case, from its fatal termination, enables us to connect the symptoms during life with the actual lesions of the brain as exhibited after death, which, while not so satisfactory to the surgeon, is often more instructive to the pupil.

Fracture of Base of Skull; Extravasation; Death.—James F——, aged fifty, foreman at a ship-chandler's, was admitted Sept. 23rd, 1857, into Abraham's ward. It appears that while engaged in minding a trap-door held up by chains at the back of the warehouse, one of the chains gave way, and he was precipitated a distance of about sixteen feet, striking his head, just before he reached the ground, against the side of a barge, and then falling in the mud. The nature of the accident is part of your evidence, and a very important part, in coming to a conclusion as to whether there is a fracture of the base of the skull—an injury which is always, I believe, occasioned by a direct blow on the vertex. He was picked up at once, and was sufficiently sensible to walk through the premises to a cab. The absence of immediate unconsciousness is no proof of the absence of fracture. By the time, however, he arrived at the hospital he was totally insensible. Blood was issuing, though not in any great quantity, from both ears; the pupils were contracted. The contracted pupils indicated an irritated brain, not a compressed one. The pulse was feeble and intermittent. This pulse is characteristic of severe injury of the brain, accompanied with slight hæmorrhage. Skin cold and moist, though this may have been partially due to the encasement of mud with which he was admitted.

Within a few minutes after he was in bed he had a strong epileptiform convulsive attack, but unaccompanied with any scream or foaming at the mouth, or turgescence of the vessels of the face and head. When I was informed of this epileptiform convulsion, I felt compelled to give a very unfavourable prognosis; for, taken with the rest of this history, it points almost with certainty to laceration of the brain, and if this man had recovered it would have been no proof that the brain was not torn. There are many cases on record of recovery where the brain has been so much torn that even large portions have been lost. I have detailed several of these cases in my work on this subject. You must, however, take care to distinguish between the epileptiform convulsion and true epilepsy, and you should always ascertain whether your patient has been subject to epileptic fits. Ordered five grains of calomel, and two grains every two hours; the head was shaved, and an ice-bag applied to the scalp; hot water to the feet.

He remained insensible throughout the day, breathing heavy, but not stertorous. In the evening he had another fit. A common enema was administered, which opened the bowels three times during the night.

September 24th.—Has had no fit to-day, but is very restless; not so insensible but that he seems to hear any question addressed to him, although he gives no, or at least no intelligent reply; once he appeared to recognize his master when he spoke to him by name; pupils contracted; pulse still feeble, but more rapid, 120; scalp very hot, making the surface of the body seem cool by contrast. Fifteen leeches to be applied to the scalp.

25th.—Has had two fits during the night; has been to-day so violent in the interim of the convulsions as to require restraint with the straight-jacket.

I am always sorry, to hear that any patient of mine, under any circumstances, is put into a straight-jacket. They are the abominations of the old lunatic asylums, dismissed entirely from all well-conducted modern ones. In these establishments one or two judicious attendants supply the place of the mechanical restraint, but in an hospital we are not provided with such attendants, and therefore, we are obliged to have recourse to the waistcoat, though even here we can often find convalescent patients who will attend to a fellow-sufferer with great kindness and judgment. The patient talks a good deal and incoherently, occasionally appears to doze for fifteen or twenty minutes; takes no food beyond a little milk, or arrowroot, or beef-tea; once, indeed, he appeared to relish a draught of cold water. Various rhonchi and large crepitation are common over the whole chest; gurgling also accompanies his breathing from accumulation of mucus, which he either has not the power or the sense to expectorate. He appeared aware of his wife's presence, but holds no intelligible conversation with her; he rambles a good deal; bowels have been twice relieved.

26th.—He appears a little better this morning; quieter, a shade more rational; scalp less hot; straight-jacket taken off; the fits towards the afternoon become more frequent, but less violent, apparently for want of power; he is hemiplegic as regards the left side: the arm falls powerless when raised, and, all along, whenever he has attempted to get out of bed, it has been withdrawn, and towards his right side; when he mutters, the mouth is drawn to the right side; the right side of the body is the most strongly convulsed when in a fit. Bowels being irritated by the calomel, it was ordered every six hours. Motions passed involuntarily.

27th.—Has two or three times asked for some beef-tea, but with this exception has said nothing connectedly. Convulsions almost incessant; pulse feeble and fluttering; pupils contracted and insensible; loud rattling in his throat; all attempts at drinking seemed to choke him. Died about midnight.

Sectio-cadaveris.—Heart: rather above natural size; there was a little deposit about the aortic valves, and some upon the lining membrane of the aorta. Lungs: both very much congested at their lower part; bronchial tubes red, and contained a quantity of muco-purulent fluid; right pleura somewhat adherent. Head: some effusion of blood beneath the scalp at the posterior part. Brain somewhat congested on the surface. At the outer and under part of the middle lobe of the right hemisphere was a laceration of its substance for an inch or more, in the immediate neighbourhood of which the brain substance was very soft; superficial to this laceration, but external to and beneath the dura mater, was a considerable effusion of blood, it was diffused, and did not form a hard clot. Just above the left lateral sinus, near the torcular Herophili, between the dura mater and the skull, was more blood also diffused. The left petrous process presented two or three small fissures, but no blood was extravasated in this part of the brain. The remainder of the brain was firm and healthy.

The next case, taken from my private practice, forcibly illustrates my assertion, that in fractures of the base of the skull the symptoms are not always so severe as to indicate so serious an injury. It is true that in this case we were unfortunately refused the only means we have of positively demonstrating to the eye the pathological condition of the brain—viz., a post-mortem examination. Nevertheless, there can be little doubt that the brain was injured by a fracture at the base.

On December 28th, 1857, I was sent for by telegraph from Dr. Boulger, of Bletchingley, to come down immediately to see a case of concussion. The patient was Mr. M——, aged twenty-four, single, a stout herculean man, a sportsman in habit, living well, but not intemperately, in first-rate condition. The accident occurred on the 26th, two days previously. He was in his dog-cart, his horse reared on starting, the reins broke, and he was pitched out backwards, falling on his head, on which the blow must have been very heavy from his great weight, which was about twenty stone. When Dr. Boulger first saw him he found him cold, senseless, and pallid. Blood of a bright red colour, but very *small in quantity*, was issuing from the left ear. No wound or abrasion of the head; the pupils active. This is a very extraordinary fact, considering the serious injury. There was no reaction for two hours; after that he vomited, and became partly sensitive for a few seconds, then relapsing into unconsciousness, and snoring slightly. The next morning he took some tea. His pulse continued feeble and oppressed through the day. No serum had followed the bleeding from the ear, which stopped at the time of the accident, and was very slight, apparently arterial. The head becoming hot and slightly painful, ice was applied to the scalp. He has passed urine, arising for the purpose; very little power to assist himself, but no paralysis. A purge, containing five grains of calomel, was now given, followed by a black draught in four hours. The bowels were comfortably relieved, and he expressed himself as feeling better; less lethargic; more sensible; pulse 65, still laboured and weak; the pupils continuing active and alike. He took tea and arrrowroot; more himself, but rather more restless; pulse about 70, but uneven and laboured. Observed that the right pupil was more dilated than the left, although it contracted slowly on the application of strong light. His tongue was moist and furred; there is occasional wandering and incoherence, on attempting to converse.

Dec. 28th, 1857.—When I first saw him, I found him lying in bed, very much flushed, his head very hot. Manner rather excited, apparently not knowing Dr. Boulger, and not answering him rationally. The right pupil of the eye rather more dilated than the left, and though it answered to the light of a candle, it did so more sluggishly than the left; the tongue moist but furred; pulse very irregular, both in force and frequency, but on the whole full and slow—it was an oppressed pulse.

In reply to my question, "Does your head ache?" he said, "Yes, it does," and put his hand to the forehead. Dr. Boulger told me that he was much worse now than when he saw him in the morning, about six hours previously. He was then quite rational, though heavy. Under all the circumstances we determined to perform venesection, as leeches could not be applied in less than two hours, and then only twenty.

Dr. Boulger opened the median cephalgic vein, and let blood *pleno rivo*, which we allowed to the extent of twenty ounces. This loss did not produce any faintness, but a very decided though only a temporary improvement. From this and the other facts of the case, I argue that there was a fracture of the base, with internal cranial hæmorrhage at the time of the injury, but that, in consequence of the effusion taking place at the base of the brain, the old reputed symptoms for diagnosing compression were absent. The practical points to be derived are the same as those from the other cases—namely, the apparent *slightness* of the symptoms in the first instances, so much so that the friends of the poor fellow would not believe that he was seriously injured, and were inclined to believe that Dr. B. was making too much of the case. Like one of the patients I have been speaking about, he would get out for every motion of his bowels. Indeed, his enormous weight rendered it almost impossible for his attendant to place the bed-pan under him, unless he had been placed on one of those beds which are made purposely for lifting heavy weights. Of these contrivances, I have seen none equal to one invented by my friend and brother-in-law, Mr. Denne, Medical Superintendent at the Bedford Asylum, and patented by Mr. Hooper, Pall Mall. This bed, I think, will prove of great value to the profession. An account of it, with a wood-cut, may be seen in Mr. Denne's Report of the Asylum.

But to return to our patient. On the following day, Dr. Boulger shaved the head, applied twenty leeches, gave three grains of calomel every three hours with the antimonial wine, and applied ice to the head.

29th.—Symptoms better; the pupils more alike; the expression more natural; less restlessness; pulse 80, but more even and regular. Arrowroot and beef-tea taken at intervals. Mercury beginning to affect the mouth. Head still hot. In the evening, twenty more leeches were applied to the scalp.

30th.—System decidedly affected by the mercury; the pulse 80, and the head much cooler, but great restlessness and prostration.

31st.—Much the same, but more restless. From this date he gradually sunk. Squinting took place, but there was no other feature of note. He died comatose on the 7th day from the receipt of the injury. The antiphlogistic measures which were adopted appeared to arrest for a short time the rapid progress of inflammatory action, but the injury was too severe to admit of cure, and the case adds another to the list of fatal injury with comparatively slight signs of cerebral mischief for the first forty-eight hours.

EXTRACT

FROM A

Clinical Lecture

ON

SOME POINTS OF PRACTICAL SURGERY.

Delivered to the Members of the British Medical Association.

By JAMES SYME, Esq.,

PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF EDINBURGH.

The next point to which I wish to direct your attention is, the remedy of obstinate strictures by external incision. There can be no doubt that dilatation, when practicable, is the best means of treating strictures; but there are cases which, from their extreme tightness, render the process very tedious and difficult; others that are so irritable as to prevent the introduction of instruments; and a third sort have such a tendency to contraction that no permanent advantage can be obtained in this way.

I saw to-day a case which afforded a good example of dilatation being insufficient to afford relief. A gentleman from Devonshire applied to me, six years ago, under the following circumstances:—After spending twenty years in the military service of the East India Company, he had gone to London, suffering from a stricture of long standing, and placed himself under the care of a late eminent surgeon, who tried dilatation in vain, and declared that he might with an equal prospect of success attempt to pass bougies through a deal board. The patient then inquiring what was to be his probable fate, received for reply, that with care, he might be able to struggle on for five or six years; and upon expressing some disappointment that at the age of forty his prospect of life should be so brief and unsatisfactory, was told that he ought to consider himself fortunate, as many men did not live so long. Curiously enough, the patient did go on for six years, without further interference, but then found his existence so miserable, from frequent attacks of fever and retention of urine, that he resolved on applying to me.

I found a very tight stricture, but passed a bougie through it and completed the dilatation to its full extent without any interruption or the slightest disturbance, either local or constitutional. Colonel —— then went home, and remained well for a considerable period. He then began gradually to suffer from a return of the disease, and last year came back to me with the contraction no less tight than it had been originally. I again completed the dilating process, although not so readily or so free from feverish attacks as upon the former occasion, and was not much surprised to learn that very soon after going home, he had again suffered from recurrence of the symptoms. He then happened to have business in London, and there, applied to a practitioner who at present happens to occupy a prominent position. This person repeatedly tried in vain to pass instruments, and the patient therefore saw no prospect of relief, except from another journey to Edinburgh. Now what was I to do in these circumstances? No doubt I could have dilated the passage again, but how long could the benefit so afforded be expected to last? and was it possible that this gentleman should every six weeks or two months perform a journey from Devonshire to Edinburgh. I felt it my duty to divide the stricture by external incision, and although a bougie has been introduced only once during the twelve months that have elapsed since he went home, I have to-day passed an instrument of moderate size into the bladder without any difficulty.

I may now show you another patient, whose case not only affords a good illustration of the advantage attending division, but is also of great interest in regard to the pathology of fistula in perineo. This man had suffered for many years from stricture, and managed to maintain evacuation of his urine by passing a bougie, but at length, labouring under complete retention, was admitted into the hospital, where we found that an abscess had formed in the perinæum. I opened this abscess in the presence of my clinical pupils, and pointed out to them that the contents were entirely purulent, which they would not have been if the usual explanation were correct—that such collections result from infiltration of urine through ulceration of the urethra; at the same time explaining, as I have long been accustomed to do, that the stricture acts merely as a source of irritation; that the abscess in the first instance has no communication with the urethra; and that the fistula or passage for the urine is of secondary formation, through giving way of the septum between the abscess and urinary passage. Accordingly in this case more than three weeks elapsed before the urine escaped by the fistulous opening, which we then endeavoured to close by dilating the stricture; but although instruments of the full size were passed regularly every three or four days during seven weeks, no improvement could be perceived. I then resolved to divide the stricture, and you now see that while the perinæum is perfectly sound, an instrument of the largest size can be passed without encountering any obstruction in the urethra.

The object which I have chiefly in view at present is to explain a source of danger attending the operation that did not originally occur to me, and of which indeed I only lately became fully aware. In performing an operation upon the living body we are not in the condition of a blacksmith or carpenter, who understands precisely the qualities of the materials upon which he works, and can depend on their being always the same. The varieties of human constitution must always expose our proceedings to a degree of uncertainty, and render even the slightest liberties possibly productive of the most serious consequences; so that the extraction of a tooth, the opening of a vein, or the removal of a small tumour, has been known to prove fatal. Then it must be admitted that the most experienced, careful, and skilful operator may commit mistakes; and I am sure that there is no one of the gentlemen present who can look back on his practice and say he has never been guilty of an error. But, in estimating the value of any surgical procedure, we must beware of confounding the effect properly belonging to it with those that result from faults on the part of either the patient or the surgeon. Cases of the latter kind can never promote the improvement of our profession, or serve any higher object than supplying food for the morbid craving of ignorance and malevolence. It is therefore to the former that I wish to direct your attention.

In originally proposing the operation, I proceeded under the impression that the only sources of danger were hæmorrhage and extravasation of urine, and that if the incision were made in the middle line, there could be no possibility of injuring an arterial branch, while the introduction of a catheter would insure a safe exit for the urine.

The procedure might thus be deemed absolutely safe. I have accordingly never seen extravasation beyond a little infiltration of the scrotum; and as to the hæmorrhage, I seldom find it amount to more than one or two teaspoonfuls at the time of the operation. In young, plethoric patients, there is sometimes, in the course of some hours afterwards, a farther flow, even to the extent of several ounces, from the corpus spongiosum, but this may be arrested by the slightest pressure of lint introduced between the edges of the wound. The only serious case of hæmorrhage I ever met with was in the case of a gentleman of about sixty years of age, from the west of England. About a week after the operation, when all seemed right, he began to bleed from the urethra. I then re-introduced the catheter with good effect for a few days, when the hæmorrhage returned, and proved so serious that I opened the wound, and tied an arterial branch, with the effect of finally putting a stop to the bleeding, and the patient is now in good health. What this vessel was, or where it came from I do not know, but I am quite sure that it had no business there, in accordance with the ordinary structure.

I advanced to between eighty and ninety cases without a single fatal result, and to show the value of statistics, may remark, that if I had stopped here it would have been perfectly legitimate for me to maintain that the procedure was entirely free from risk. It is true that alarming symptoms were by no means rare, since every third or fourth patient suffered from rigors, vomiting, delirium, or suppression of urine, but as they passed off in the course of twelve or twenty-four hours, I had come to regard them as rather curious than alarming, and as merely the result of some harmless commotion of the nervous system. At length a very distressing case gave me a different view of the subject. The patient suffered nothing from the operation; had the catheter taken out on the second day; was quite well on the third, and on the fourth was lying dressed upon a sofa in the best of spirits. In the afternoon of that day, during the act of micturition, he felt an acute pain in the perinæum, and in walking from one room to another, fell on the passage so as to graze his forehead and the outer side of his knee; at the same time he had a violent rigor, followed by quick pulse and great pain in the injured parts. As the urine passed freely and entirely by the urethra, I expected that these symptoms would soon subside, but they continued, and went on to suppuration of the knee, with destruction of the eyeball, and terminated fatally at the end of several weeks. I felt quite unable to account for this case until the following one gave me additional light on the subject:—The patient suffered nothing from the operation, which was of the simplest kind, and as he did not complain at all of the catheter, was allowed to retain it three days. When it was then removed, he expressed perfect comfort, and afterwards wrote to his friends at home the most satisfactory accounts of his progress. At three o'clock of the afternoon he passed urine, and felt some pain in doing so, which was attended with a slight discharge of blood. Immediately afterwards he had a violent rigor, followed by delirium and insensibility. There was no pulse, no secretion of urine, and he died the next day. On examination there was not the slightest trace of urinary extravasation, or any other sign of local mischief; but the kidneys were gorged with blood to an extreme degree; and it was plain that death had resulted from a sudden shock to the nervous system.

In endeavouring to account for this effect, I recollected that the symptoms of disturbance were always connected with micturition after withdrawal of the catheter; and I also recollected that in all my practice, private as well as public, I had never, even in a single instance, encountered any bad effect of the kind in question, when there was a fistula in perineo. It, therefore, occurred to me, that the cause of disorder must proceed from the action of urine upon a raw surface produced by tearing of the imperfectly-united wound in the urethra. Under this impression, I thought that safety might be insured by preventing the wound from healing through frequently introducing the finger, so as to touch the catheter, and treated a number of cases on this principle with perfect success. But the tendency to union between the cut edges of the urethra is so strong that I sometimes found it necessary to use a little force in exposing the instrument; and upon two occasions of my doing so, the same deadly symptoms supervened that it was my object to prevent. I therefore resolved to obviate the danger more effectually by introducing a short catheter by the wound in the perinæum, and my principal object at present is to recommend this plan for your adoption. The instrument you see is about nine inches in length, slightly curved in opposite directions at its extremities, and having a couple of rings just behind the anterior bend for securing it in its place. In addition to the great advantage of affording perfect security, this catheter is much less irksome to the patient than the one hitherto in use, and cannot, like it, produce any bad effect by pressing upon the coats of a contracted bladder. It may be supposed that from not distending the urethra at the seat of stricture there may be inconvenience from contraction; and to obviate this, I used in some cases this flexible bougie, having a loop of thread at its extremity, which, being protruded from the wound, allowed the catheter to slip through it, and so distend the canal. But this complication, I am inclined to think, is quite unnecessary, as the absence of it has not led to any practical inconvenience.

It has been frequently and very incorrectly said that I maintain the possibility of passing instruments at the first attempt in every case of stricture. I never did so, although it is true that during thirty years' practice I have never found it necessary, either in public or in private, to puncture the bladder on account of retention of urine from stricture; but in many cases I have required repeated and careful trials before being able to pass a bougie through the contracted part, my maxim always being, that if the urine gets out, an instrument, through time, care, and patience, may be got in. If, indeed, the canal has become obliterated by the effect of external injury, the state of things is different, and then the ordinary procedure is no longer applicable. I communicated to the Medical and Chirurgical Society of London a mode of overcoming this difficulty, which seems much more eligible than the old plan of cutting on the point of an instrument at the seat of obstruction. It was to pass a curved director, with its groove upon the concave side, through the fistulous opening into the bladder, which may always be very easily done, and then to push down upon it the instrument employed for guiding the incision in dividing strictures, so that the narrow portion of it is forced through the obstructing texture exactly in the proper course of the urethra, and thus conducts the knife with certainty in the proper direction. I had lately an opportunity of learning that one of the two cases mentioned in that communication remains perfectly sound and well. The young man now before you affords another example of this plan proving successful. He came from Halifax, in Yorkshire, on account of a fistula in perineo, through which every drop of his urine had passed for five months, since the receipt of an injury by falling astride on a beam of wood. On examination, I found the urethra completely obstructed, and therefore performed the operation just described, with the effect, in six weeks' time, of restoring him to his present state of comfort. He now passes his urine in a full stream entirely by the urethra, and is going home with the prospect, I trust, of enjoying good health.

In connexion with this subject, I may notice a curious case that was lately sent to me by a gentleman now present, Dr. Roberts, of St. Asaph. The patient was a gentleman of about thirty-seven years of age, who had suffered long and severely from stricture, with fistula in perineo. In passing a small metallic bougie, I felt a hard substance behind the contraction, and, from my recollection of a similar case, at once recognised it as a piece of bone. Without delay, the stricture was divided, and these four small bodies removed. The largest has the size and form of a pea, the others being smaller and of an irregular figure. The largest one distinctly shows the osseous characters, but the smaller ones require a microscope for their detection. Urinary concretions are frequently met with behind a stricture, but exfoliations are hardly to be looked for in this situation, and can be accounted for on the present occasion only by the patient having in childhood suffered from disease of the pelvic bones.

Original Papers.

ON SOME POINTS IN THE THERAPEUTICS AND CLINICAL HISTORY OF ASTHMA.

By Hyde Salter, M.D., F.R.S.,

ASSISTANT-PHYSICIAN TO CHARING-CROSS HOSPITAL.

(*Continued from October, No., p. 266.*)

ON THE TREATMENT OF ASTHMA BY THE INHALATION OF THE FUMES OF BURNING NITRE-PAPER.

One of the most valuable remedies that recent experience has furnished us with for the treatment of asthma consists in the inhalation of the fumes of burning nitre-paper—bibulous paper which has been dipped in a saturate solution of nitre, and dried. How or by whom it was discovered, or exactly when, I know not; but from the references made to it by different authors, it must have been in use for nearly twenty years, and its great value and efficacy are now beyond question. Let me briefly relate a few cases that have come under my observation, in which this treatment was successfully employed, and then offer a few observations on the method of administering it, and the *rationale* of its operation.

Case 1.—P. K. W——, a young lady, aged twenty, who has had asthma ever since her fourth year, at which age the disease appeared with the symptoms of an ordinary cold; in a very brief time these passed into what was supposed to be a severe attack of bronchitis, but the *suddenness* with which all the symptoms disappeared at once made it evident that the attack was of a spasmodic rather than an inflammatory character. She was immediately taken to the seaside, and for four months had no return of the asthma. From that time, however, the attacks became much more frequent, so that it was impossible for her to leave the house during the winter, and this for several years, and indeed one winter she was scarcely able to leave her room. As she advanced in years the attacks became more distressing; change generally produced temporary relief, but three weeks scarcely ever passed without an attack more or less severe. Of the results of treatment, her father, who is a medical man, writes thus:—"Of treatment I can say but little. In the earlier part of her life I gave her the benefit of consultation with a physician connected with one of the London hospitals, and subsequently with other medical men; but, to be candid, I must say that I cannot look back to any of their treatment, or my own, with a belief that it lessened the frequency of the attacks or mitigated their severity when they occurred. But, though she derived no benefit from any medicines, I must not omit to state that she has always (save in those attacks which resulted from inflammation of the mucous membrane of the bronchi) experienced very great relief from burning bibulous paper, previously soaked in a saturated solution of nitrate of potass, and then dried. The room became almost instantly filled with a dense smoke, and that which was pretty nearly death, or at least the greatest inconvenience, to others, was to her a sourse of the greatest comfort, always mitigating and sometimes completely relieving the spasmodic condition of the air-tubes. The most striking instance of its efficacy was during the worst attack of asthma that I have ever witnessed. My daughter on the night to which I refer had retired to her room with gloomy forebodings—the frontal headache, the tightness of the chest, the wheezing respiration, all foretold the coming attack. About seven in the morning the paroxysm was at its height, and as I entered her room the sight was indeed most pitiable: the livid distressed countenance, the body thrown forward with the hands firmly pressing on the bed, the shoulders raised to the ears, the noise of the air passing through the narrowed tubes, so loud as to be heard in the lower part of the house, all showed too plainly the fearful struggle for life, and was the more distressing from the entire failure of every means which had been used to alleviate her sufferings. For a few minutes slight relief seemed to follow the quick and regular passing of the hand along the course of the spine. I had left the room for a short space. Alone with her maid it seemed to both as if the contest could be continued no longer; in her agony she was just able to gasp out 'try the paper again.' Taking a large sheet, the servant quickly filled the room with a cloud, more dense, if possible, than a London fog. Scarcely had two minutes passed, when, changing her position, she reclined her head on the shoulder of her attendant; two minutes more and she was lying back supported by a heap of pillows; and conceive, if you can (for I cannot tell you), my surprise and joy when, on entering her chamber within ten minutes of leaving it, I found her breathing as quietly, as noiselessly almost, as a sleeping infant; a change so sudden, so complete, I never before witnessed. You will not wonder that nitre-paper has become an indispensable adjunct to the family medicine chest, or that my daughter should be loud in its praises and grateful for its benefits. The attacks have much diminished both in frequency and intensity of late; but the paper still maintains its high position as a remedial agent, and many have been the assaults warded off or repulsed by filling her room with its smoke when first she retires to rest."

Case 2.—G. T——, aged forty-seven, has always had asthma, his first attack dating from cold in infancy. The frequency of the attacks is about once every three or four months, and their time of access about two or three o'clock in the morning. The only thing that he has found do him any good is the inhalation of the fumes of burning nitre-paper, which, however severe his asthma may be, enables him to breathe easily. On the approach of a paroxysm he lights two or three sheets of this paper, which soon fills his room (rather a small one) with dense fumes. He describes the first effect as being somewhat oppressive and suffocating; but this is soon followed by a mitigation of the dyspnœa, and then its entire disappearance. This is invariably the result; and the relief is not temporary but permanent—the attack is cured.

Case 3.—E. P——, aged thirty-five, married, having previously enjoyed excellent health, and never suffered from any thoracic affection, was seized with what was thought to be severe inflammation of the lungs supervening on exposure to cold; but the urgency of the dyspnœa, the suddenness and completeness of its departure, and the repetition of the attack soon after, showed it to be asthmatic. From that time the attacks were frequent—every month or so. Every remedy was tried that could be thought of, but with no beneficial result. At length, happening to see in an American paper an account of an asthmatic who, having used all his tobacco, had on an emergency filled his pipe in default of it, with the match-paper (paper soaked in a solution of nitre) with which he was accustomed to light it, and to his surprise had experienced more benefit from this than from his tobacco, and wished to know "the reason why," she was advised, by way of experiment, though little expecting benefit, to give it a trial. To her surprise she experienced great relief, and in her after trials still more, because she managed it better than she had at first, and was more familiar with its manipulation. From that time she found it an unfailing remedy. Its effects were rapid and complete, and never failed. There was, however, one exception to its efficacy, and that was whenever the asthmatic attack was brought on and accompanied by bronchitis; in that case the relief it gave was trifling—it was hardly any good: the fact was that it only relieved the bronchial spasm—only put a stop to the asthmatic portions of the dyspnœa while the bronchitic portion persisted; and, moreover, there was in the inflamed condition of the bronchial mucous membrane a permanent exciting cause that probably restored the bronchial spasm almost as soon as relieved. At first the paper was used only every month or so, as the attacks were rarer; but as the disease became more severe, the attacks occurred more frequently, and at last the paper had to be resorted to every day. Always at night, before going to bed, she burnt it in her room; indeed without it she could not have gone to bed or got any sleep. It invariably had a marked sedative effect, sent her off to sleep in a few minutes, she could not resist the drowsiness that it gave rise to—she was quite overpowered by it, and was obliged to be watched lest she might fall forward or drop the burning paper on her dress; she would give warning when she felt her drowsiness overpowering her, that the burning paper might be taken from her, and that she might put herself in a position from which she could not fall, as she had not power to save herself. Even by day, and when not previously sleepy, it would put her to sleep as well as cure her asthma in ten minutes: but if at all sleepy, as in the evening, she would be quietly asleep in three minutes. Now, we know that many remedies that relieve asthma are immediately followed by sleep in consequence of their removing that laborious dyspnœa which is the cause at once of the wakefulness and the weariness. But that this was clearly not the way in which the nitre fumes acted, but that they acted as a positive sedative, was shown by the fact that if her asthma awoke her at night from sleep, and prevented her sleeping, the burning of the paper had the same speedy sedative effect. As soon as her asthma woke her, she would strike a light and burn her paper, which she always kept by her bed-side, and get immediate relief, and so quickly and suddenly would the sleeping come on, that though quite independent of her husband in the commencement of her operations, she was always obliged to wake him that he might take the paper of her when the drowsiness overcame her. In three minutes after lighting the paper she would be sound asleep; sometimes her husband could hardly take the paper quick enough, so sudden were its sedative effects. Now here she was awoke *from* sleep to fall again asleep in two or three minutes; there had been no accumulated want of sleep, no weariness from protracted laborious dyspnœa. So uncertain was the time at which an attack might occur, and so certain was the effect of the nitre-paper, that this patient never went anywhere without taking some of it with her in her pocket. If an attack came on at any time she would resort to it. Sometimes when making a morning call she would find her asthma coming on; she would bear the increasing dyspnœa as long as she could, and then, when she could bear it no longer, she would ask to be allowed to retire to some room to use her remedy, and in ten minutes return to her friends as well as ever.

Case 4.—H. H——, a gentleman residing in a country town, has suffered from asthma for twenty-five years. At first it occurred regularly every third night, but of late years has been less regularly periodic; the usual time for the attack to come on is two o'clock in the morning. Of the effect of nitre-paper in his case this gentleman has given me the following account:—

"I certainly have great faith in the fumes of nitre. I have used it for twenty years, and *when the difficulty of breathing is purely spasmodic* I am sure to get relief by its use. I use it in the following manner: when I feel my breathing uneasy I burn a piece of the saturated blotting-paper in my bedroom on going to bed, and, by lying high at head, I am almost certain of getting a good night, and of leaving my room in the morning free from the paroxysm. I use *blotting-paper*, but a friend in London tells me that he uses *tissue*-paper, which is thinner, and does not smoke so much. I think this is an improvement, but there is more difficulty in saturating it, in consequence of its thinness."

This gentleman adds—"Sometime since, I heard of a very bad case at Sturminster Marshall. I sent the poor man some papers, and requested to be informed, in the course of a few days, what effect they had upon him. I enclose the poor fellow's answer; he is only a farm labourer." The answer was, *verbatim et literatim*, as follows:—

"June the 20, 1855.

"Honored Sir I have made a trial of your Goodness what you sent to me Sir and I am Happy to inform your Honour that it is the Best advice I ever had at all for I went to Bead at 7 at night and never a woke untill 5 the next morning and that is more that I have done for this 10 weeks past Honored Sir I do not know how to express my grattitude to you a nogh for your great and mercifull kindness to me Honored Sir I return you Sir most Humble and Hartery thanks for your goodness to me Sir I remain your obedient and oblided servant J Christopher."

Case 5.—Even now, while I am writing, another case has come under my knowledge. It is that of a gentleman, an asthmatic from infancy, but who has of late years enjoyed an almost perfect immunity from his disease in consequence of residing in London. But whenever he goes into the country he is sure to be assailed by his old symptoms and cannot pass a night without asthma. Moreover, there is exhibited in his case that disposition to habitude—that tendency to maintain, like other periodic diseases, the rhythm of its recurrence when once it has been established—which so often characterizes asthma, so that when once his disease has been excited by going into the country, it still continues on his returning to the place and to all the circumstances and conditions of life in which before, he had been free from a trace of his disease. Two or three weeks ago, when in perfect health, he went into the country, and suffered from his asthma as usual. On his return, it still continued—hung about him; hardly a night passed without its awaking him, and as it went on for several weeks without subsiding in the usual way, he determined to try the nitre-paper. It was tried at once and was perfectly successful. He burnt two or three pieces of the paper in his room just before going to bed, slept without waking till about seven o'clock in the morning, and then awoke with his breathing perfectly free. He repeated it for several nights with the same effect. He then thought he would put it to its trial, so he took a late and not particularly wholesome supper, a thing very apt to bring on his asthma, then used his nitre-paper, went to bed, and had as good a night as ever. He then omitted it, and during that night his symptoms reappeared. He recurred to it the next night and for several following, and then on leaving it off suffered no return of his disease; the disposition to the nocturnal recurrence of the paroxysm had vanished—the spell was broken. He has not used it since, and probably will not till another visit to the country sets him wrong again.

I might multiply cases to almost any extent; hardly a week passes without my meeting one or more. Within the past week I have met with two, in one of which the nitre-paper was the only thing that did any good, in the other its efficacy was shared by stramonium. It has been suggested to me that if the nitre is dissolved in a strong infusion of stramonium instead of water, the result is more satisfactory, but of that I have not made trial.

Let me give a few practical hints with regard to the making of the nitre-paper. And this is not an unimportant point, for patients will find it more convenient to prepare the paper themselves, and if it is not properly made, it will not produce its beneficial results. The object is to have as much deflagration of nitre and as little combustion of paper as possible. For that purpose the paper must not be very thin, or it will not take up sufficient nitre; or very thick, or it will make the fumes too carbonaceous; but it must be moderately thick, and very porous and loose in its texture, so as to imbibe a sufficiency of the solution. The strength of the solution should be saturate at the ordinary temperature. If a saturate solution is made with warm water, and the paper is very bibulous, it becomes too much impregnated with nitre—too strong a paper, and burns too fast, with a sudden explosive flame. There should be no brown smoke in its combustion, but light, clear, white fumes. Those who have had a good deal of experience with this remedy tell me that they find the red blotting-paper, of moderate substance, the best. Some blotting or filtering papers appear to have a good deal of wool in them; they are loose, thick, and coarse. They should be particularly avoided, as they yield, on burning, a smoke of a particularly irritating and offensive kind, something like the smell of brown-paper smoke, only worse. The nitre-paper, when once made, should be kept in a dry place, and then will not be the worse for any amount of keeping; but if it gets damp, it does not burn with sufficient freedom, and should then be dried before using.

The following is the way in which an asthmatic gentleman tells me he has been accustomed to make a paper that answers perfectly well:—"Dissolve four ounces of salpetre in half a pint of boiling water; pour the liquor into a small waiter, just wide enough to take the paper, then drain it through the liquour and dry it by the fire; cut it into pieces about four inches square, and burn one piece in the bedroom on retiring to rest at bedtime." I have tried this method of preparing the paper myself, and find that it burns perfectly well and is very efficacious; but I think *two* pieces are not at all too much to burn at once.

TREATMENT BY DIRECT DEPRESSANTS—IPECACUAN, TOBACCO, ANTIMONY—VALUE OF TOBACCO IN HAY-ASTHMA.

Of all the different kinds of evidence on which we build our theories of the pathology of diseases, there is none more convincing, or that tells a plainer tale, than that which is derived from therapeutics. The success of a remedy given on certain principles proves the correctness of the principles on which it was given, and the known action of a medicine directly implies the nature of the pathological state that it relieves, as it shows that in any case of its successful administration the pathological state must have been such as that known action would antagonize or correct. This reflected evidence has all the force of the fulfilment of a prediction; it is like the appearance of Halley's comet at the exact time that its discoverer foretold.

The purpose of this communication is to direct attention to the great efficacy and value, in the treatment of asthma, of certain drugs belonging to a class whose therapeutical action is very strongly marked, and about whose *modus operandi* there is no doubt, and which throw, therefore, a very clear light on the nature of the pathological condition that they relieve—the class of direct *depressants* or *contra-stimulants*. It is a class of remedies that exercise the most singular and powerful influence over the asthmatic condition, greater and more immediate than any other I know, except, perhaps, mental emotion. As soon as their characteristic effect is established, the dyspnœa ceases—completely ceases from that moment; no matter how intense the spasm may have been, the moment the sensations characteristic of collapse are felt it yields, and the respiration is free, and the patient passes from agony to ease. It is one of the most striking things to witness, in the way of the effect of a remedy, that can be imagined.

The three drugs of this class with whose use in asthma I am most familiar are, ipecacuan, tartar-emetic, and tobacco. No doubt they all act in the same way—by lowering innervation, depressing nervous vitality or irritability, or whatever we may call it, and enfeeble the contraction of the bronchial muscles just as they weaken the heart's action, or relax the grasp wherewith a strangulated hernia is constricted, or relieve urethral stricture, or the spasm of colic.

With regard to their *modus operandi* in asthma, I think a good deal of misconception very generally prevails; they are thought by some to act as emetics, by some as so-called expectorants. I believe they act neither as one nor the other, but as direct depressants, relaxing the spasm of the bronchial tubes in the way I have mentioned. Let me just relate a case in which I had ample opportunity for some years of watching the effect of ipecacuanha.

The patient was a youth who had been asthmatic from his infancy. His attacks had increased in frequency till, at the time to which I refer, they occurred with tolerable regularity once a week. His asthma generally woke him about four or five o'clock in the morning, and soon compelled him to sit up and wheeze in bed, or get out of bed and stand against some piece of furniture for support. In two or three hours he would be able to dress himself; and, perhaps, in the forenoon, the severity of the dyspnœa would a little abate; but towards the afternoon and evening it would deepen, and towards bedtime get so intense that without an emetic there was no chance of sleep. The emetic would be taken, and in half an hour he would be perfectly easy, without the slightest trace of asthma. He would then take a light supper, go to bed, sleep like an infant, and have no more asthma till that day week. In this way he would have fifty attacks, or thereabouts, in a year; and cut them short at night with fifty emetics. If he did not take the emetic, he passed a miserable, sleepless night, and was still bad the next day; indeed there was no definite end to the attack without it. I think *now*, that if he had taken it earlier in the day, or even in the morning on first waking up asthmatic, he would have cut short the attack equally well, and have saved himself a great deal of suffering. I never knew it fail. The dose taken was always twenty grains of the ipecacuanha powder, and, although he repeated it so frequently, it neither lost its efficacy nor did him any harm. It was clearly not as an emetic that it acted, but as a depressant; for the relief took place before the vomiting. About ten minutes or a quarter of an hour after swallowing the draught, a sense of nausea would be felt, accompanied with a slight faintness, and dampness on the skin, and a profuse secretion of saliva, which came from his mouth in a little clear stream. It was then that the spasm gave way, before a single act of retching had occurred; and his attendants would immediately know when the first sense of nausea was felt by the relief of the breathing that invariably accompanied it. Besides, the stomach was always perfectly empty; there was nothing of which it could be relieved.

The effect of *tobacco* is exactly the same, only the depression that it produces is more profound and amounts to actual collapse, and the relief, therefore, more speedy and complete. In those who have not established a tolerance of tobacco, its use is soon followed by a well-known condition of collapse, much resembling sea-sickness—vertigo, loss of power in the limbs, a sense of deadly faintness, cold sweat, inability to speak or think, nausea, vomiting. The moment this condition can be induced the asthma ceases, as if stopped by a charm. In one case in particular I have frequently watched its effects. In the case that I refer to, the asthmatic fortunately never established a tolerance of the drug, and thirty whiffs of a pipe or half a cigar would at any time induce a condition of collapse. I have known him begin to smoke when his breathing has been so difficult that he could hardly draw his pipe; he would draw a feeble whiff or two, and then stop to recover his breath, and then another whiff, and so on. By-and-by he would lay down his pipe with a look of intelligence at his attendant, as much as to say "it's all right now;" his face would become pallid and damp with perspiration, his limbs relaxed, his breathing long and sighing, but his asthma was gone. His object was to smoke just so much as to produce this condition, and no more, so that the moment he felt the sensation coming on he stopped. After this qualmy condition had continued for twenty minutes or half an hour, it would go off and leave him well—the attack cured. Sometimes, however, he would take a little too much, and then it would go on to vomiting, and sometimes he would overdo it altogether, and produce a deadly and protracted collapse, from which it seemed as if he would never recover. I have known his pulse hardly perceptible for nearly two hours, in spite of ammonia and brandy freely administered. It is this circumstance—the fear of this horrible and unmanageable collapse—that makes one so unwilling to employ tobacco; it is indeed a dreadful remedy, almost as bad as the disease; but the asthmatic is willing to undergo anything to get quit of his sufferings.

The following account, illustrative of the effect of tobacco, I have received from an intelligent patient long subject to severe asthma:—

"I have always found perfect relief from smoking tobacco in the attacks of spasmodic asthma to which I have been liable. In describing my own experience, I should say that no relief is felt till the poison gives evidence of having taken effect by its disagreeable consequences; and just in proportion to the sickness and faintness, and other miserable sensations, is the relief of the difficult breathing. I never knew this remedy fail. As the use of tobacco was new to me, it affected me very powerfully, and produced the most miserable prostration and faintness. The cure of the asthmatic spasm was very speedy, and frequently it was forgotten altogether in the horrors of a sensation known to all novices in smoking, so that I was frequently unconscious of its disappearance, or of the mode or time of its departure; the asthma seemed supplanted by another condition, and cold perspiration and fear of collapse closed the scene. I am not aware whether this was followed by expectoration, and the presence of mucus in the throat removed by the usual process—the common action of 'clearing the throat,' as it is called—which invariably appears when an attack of asthma spontaneously subsides, and which always accompanies the slower cure resulting from the mild use of ipecacuanha, which of late years I have preferred to tobacco, as my asthma is not of sufficient intensity to require so violent and distressing a remedy. I imagine these more natural and ordinary symptoms of recovery would always accompany the use of ipecacuanha, and that an increased dose would only accelerate the process of recovery up to the interruption by vomiting. The difference between the characteristics of these two modes of cure appears to me to be strongly marked and very important. I conceive this to arise from the intensity of the depression caused by the poison of tobacco, which cannot be the case in the use of ipecacuanha, as it is a simple emetic, and I doubt if the same kind of sensations and depression could be produced by ipecacuanha, even if its effect could be carried on, and the medicine were not rejected by the stomach, which is invariably the case when the effect is increased to a certain point. I have not gone beyond the stage of perspiration and a feeling of sickness, and I have always found the cure to resemble the natural process of mucous discharge and clearing of the air-passages, only more promptly induced and more rapidly performed. I have frequently had short spasms of asthma produced by laughing, lighting a lucifer-match, or some other special irritant, from which I have recovered as rapidly as when under the influence of ipecacuanha, going through the stages of silent asthma, audible asthma, and the expectoration mentioned above, in about the space of ten minutes or a quarter of an hour. The distinction between these two modes of cure or relief is worthy the attention of medical men and their patients, as much distress and perhaps injurious results might be avoided if the ipecacuanha is found to be as efficacious as tobacco. My only doubt is whether tobacco might not be preferable in desperate and suffocating spasms on account of its speedy and violent action."

No doubt there is such a difference as that indicated above in the action of tobacco and ipecacuan. Ipecacuan, I think, could never produce such collapse as that caused by tobacco; but that it does not always act as an expectorant or emetic, but as a direct depressant, is shown by the case that I related just now. The fact is, ipecacuan acts very differently on different individuals: in some, producing vomiting with little more irritation than sulphate of zinc; in some, producing collapse to a considerable degree. Moreover, by relaxing the bronchial spasm, ipecacuan renders free cough and expectoration possible, which were previously impossible, from inability to get sufficient air into the lungs to effect them; so that the expectoration is the consequence of the relief, and not the relief of the expectoration.

In that mild but annoying form of asthma that accompanies the other symptoms of hay-fever, and is known as hay-asthma, tobacco pushed *ad nauseam* gives more relief than any other remedy. In a relative of mine who is very much afflicted with this troublesome complaint, tobacco-smoking is the only thing that gives any relief. During the hay season and all the early hot summer weather, he suffers (besides the sneezing and running at the eyes, and tumid burning of the nose and throat, characteristic of hay-fever) from paroxysms of a wheezing dyspnœa of the true asthmatic type, coming on exclusively at night, so as almost to deprive him of sleep. During the rest of the year he never smokes, as it is disagreeable to him, and in other respects prejudicial; but during this season he is quite dependent on his cigar for any degree of comfort, or alleviation of his symptoms. The following graphic account of the relief he finds from tobacco, I cannot do better than give in his own words:—

"There is no remedy during a paroxysm of hay-asthma that has anything like the effect of smoking tobacco; and though this is especially the case in the latter stage of the attack, when the asthmatic element of the phenomena is most developed, still in the earlier stage, when the lachrymation, sneezing, and faucial irritation are most distressing, tobacco-smoke has, in my case, a very marked influence in soothing and diminishing these symptoms.

"No doubt any of those medicines which Dr. Pereira has called '*cardiaco-vascular depressants*,' would produce a somewhat similar result; but none is of so easy application, or can be used so readily or pleasantly as tobacco. During the hay-asthma season—i. e., in my case, from about the 15th of May, to the 10th or 12th of July, I regularly smoke a cigar the last thing before going to bed, or perhaps more frequently after I am in bed. The effect is, that (excepting during the last fortnight in June, when I never get a night's rest) the sedative influence of the tobacco prevents the occurrence of any asthmatic spasm. If during this period I omit my cigar, I seldom sleep beyond four o'clock; usually three o'clock finds me awake, hopelessly, though generally only slightly asthmatic, for the rest of the night; till, indeed, about nine o'clock, when almost always the asthma completely leaves me. This night-cigar is taken as a preventative. But tobacco will cure the asthmatic spasm when it is fairly on; only it requires a larger dose of the poison, and in a stronger form. The sedative influence of the cigar will usually ensure me a fair night's rest; but the powerful depression of strong shag-tobacco is necessary to cut short the spasm when it is established. Even when I do smoke my night cigar, I not unfrequently have to get up about three or four o'clock in the morning and smoke; and during the last fortnight in June, this happens almost nightly.

"Distressing as are the sensations of collapse from tobacco-poisoning, they are an unspeakable relief when contrasted with the impending suffocation of asthma. I shall never forget an attack which I once had, and the joy with which I hailed the approach of collapse from tobacco-poisoning. It was late in July, many years ago. I had gone into Dorsetshire to stay with a relative in a country house. Immediately surrounding the house were grazing fields—not hay-fields,—and they had not been mown. In this field was a grass—*Nardus stricta*, I think—still blooming luxuriantly; for it is a grass which cattle will not eat; and thus, though past the usual time for hay asthma, I was accidentally surrounded by its most potent cause—grass in flower. The night came, and I had not been an hour in bed when I was attacked with the most violent asthma I ever experienced. There were no cigars in the house; but one of the servants had some rank shag-tobacco. I smoked one pipe, then another; and as my face blanched, and my pulse failed, and the cold sweat stood on my forehead, miserable as were the sensations of collapse, they were Paradise to the agonies of suffocation. I shall never forget those moments of relief.

"The story of this attack of asthma, by the way, is a very instructive one; and I may just add it here in brief:—I left my friend's house the day after this paroxysm, and went to the sea-side, where I was as usual perfectly well. Two days after, I received a letter from him asking me to return, as he had had the grass in flower about his house cut down. I did so, and remained with him a fortnight, sleeping every night as placidly as an infant. The *Nardus stricta* had given me the asthma: the scythe had cured it.

"To return to the tobacco. A hay asthmatic should never smoke tobacco but for his malady. Smoking should never be to him a habit or a meal, for it then ceases to be a medicine. Indeed to him it should be a deadly drug, for it is by poisoning that it cures."

Not long ago, I was conversing on the subject of his malady with a surgeon of some distinction in this city who is grievously victimized with hay-asthma, and on asking him what he found do him any good, he replied, "Tobacco; tobacco is the only thing; nothing does me any good but smoking;" and he went on to tell me, that whenever he found his asthma very bad, and that he shall get no sleep without it, he immediately resorts to a cigar. But the smoking does him no good unless it produces a condition of collapse; the mere sedative effect of it is of no use to him whatever; and having lost, from the habit of smoking, an easy susceptibility to tobacco influence, he adopts the following device to secure its more potent effect: he fills his mouth with tobacco-smoke, and then instead of breathing it out again at once, as is usual in smoking, retains it in his mouth for several seconds, perhaps a quarter of a minute, then takes another mouthful, and so on. In this way, he finds that the tobacco is more rapidly absorbed by the mucous membrane of the oral cavity, and that a state of collapse is speedily induced. The moment the faintness and sickness comes over him, the asthma ceases, he turns into bed and has a good night.

The effect of antimony nearly resembles that of tobacco, and it acts in the same way, but the nausea and collapse it produces are long and tedious.

Of the three drugs, I should say ipecacuanha is the most manageable, and entails the least suffering; tobacco the most speedy and effectual.

There are one or two practical points on which I would wish to add a few words.

Remedies of this kind, given with the view of cutting short the paroxysm, should be given as early as possible; and for two reasons: first, because it is much easier to break through the asthmatic condition when it is but just established, while the longer it is allowed to go on the more inveterate and uncontrollable it becomes, and the more difficult it is to arrest it; indeed its giving way at all may depend on the earliness with which the remedy is applied. I have known treatment powerless after the dyspnœa has continued for some hours, which never failed if administered as soon as it declared itself. Just at starting, in the earliest stages of the paroxysm, a very slight thing will determine its advance or retreat, and in proportion as it advances and deepens, in just such proportion do remedies become inoperative. The other reason is, that if the spasm *does* yield in spite of having been some time established, the recovery is not so complete as if the remedy had been applied immediately on its appearance. The longer the bronchial stricture lasts the greater is the arrears of breathing and the resulting pulmonary congestion; and if this goes on unchecked and increasing for many hours, the disturbance of the vascular balance becomes so great, the capillaries of the lungs so loaded, that it is a long time, many hours, or perhaps even days, before that balance is restored, and the vessels recover their normal condition; and although the bronchial spasm may completely give way, there remains a certain amount of shortness of breath and an incapacity for exertion, and it is not until an abundant expectoration of mucus has taken place, by the pouring out of which the loaded vessels have relieved themselves, that the chest becomes clear and the breathing free. In asthma at once cut short there is no such accumulated congestion—no mucous exudation, and when the bronchial spasm ceases all dyspnœa vanishes. If on first awaking with the sensations of asthma, the asthmatic nauseates himself with tobacco, or smokes his nitre-paper, or keeps himself in a standing posture, or in any other way cuts short the paroxysm, he will be throughout the succeeding day exactly the same, with the exception of the sleep he has lost, as if nothing had occurred; but if he suffers the fight between asthma and sleep to go on long, and then on the first remission of the dyspnœa lies back and goes to sleep, he will protract the asthmatic state, deepen the consequent pulmonary arrears, and not only postpone his recovery for many hours, but make it then slow and imperfect. I know an asthmatic who now never loses a day by his disease in consequence of the promptitude with which he meets its first appearance in the early morning, but who formerly, from continuing to lie in bed, and try to get sleep after the asthma had begun, protracted his sufferings through the day. He is attacked as often as ever, and at the same time—about three or four o'clock in the morning, but the moment he finds his asthma on him he takes measures to keep himself wide awake—stands leaning against a piece of furniture, and, if necessary, induces tobacco collapse, so that instead of a day's asthma he has half an hour's, and, as far as all the engagements of life go, has ceased to be an asthmatic.

It is a difficult thing for the asthmatic, I know, overwhelmed with sleep as he is, and generally with a peculiarly heavy drowsiness upon him, to leave his bed or light and smoke his pipe; but he *must* do it; he must rouse himself fairly up and adopt at once those remedies that in his particular case are most efficacious. In fact, the treatment of the asthmatic paroxysm should be so prompt as to be almost rather preventive than curative; in the treatment of no disease is the injunction "*obsta-principiis*" of more vital importance.

One is sometimes asked—Which is the best form of tobacco to use, a cigar or a pipe? I think a pipe has the advantage of more certain strength; cigars vary so much, even the same sort. The tobacco that I generally employ is bird's-eye, as being a mild tobacco, and one by which you run little risk of inducing alarming collapse. *Shag*, or any other of the strong tobaccos, should not be used by the uninitiated, as the collapse they produce is apt to become protracted and unmanageable. For ladies and young children, a few whiffs of a mild cigarette are quite sufficient.

Of ipecacuanha, I think the powder is better than the wine. I never give a very small dose, it is uncertain and teasing. I would say, always give such a dose as will be certain to secure its own prompt rejection. I never give less than twenty grains, however young the patient may be; it never does harm.

But ipecacuanha is a nauseous thing; and especially to those who have frequently taken it as an emetic it becomes almost intolerable. I have lately discovered that it may be taken very pleasantly and very efficaciously in the form of some strong ipecacuanha lozenges made by Messrs. Corbyn, of 300, Holborn. They are about four times the strength of ordinary ipecacuanha lozenges; three of them will produce prompt vomiting. They are very convenient, too, for keeping up a slight nausea; and for children they are invaluable. If vomiting is desired they should be bitten and ground up in the mouth and swallowed at once.

There is one circumstance that greatly detracts from the utility of tobacco in the treatment of asthma; that practically, indeed, almost destroys it. Our adult male population have so habituated themselves to its use that they have lost the susceptibility to its full influence, and cannot induce complete collapse by any amount of smoking. Now adult males constitute by far the majority of the subjects of spasmodic asthma; and thus the habit of smoking has rendered powerless, in a large number of cases, what I think may, without any qualification, be called its most potent remedy.

To the practical I need not apologise for these trifling hints, of which I know they will recognise the value.

Montague-street, Russell-square, September, 1858.

Clinical Illustrations
OF
DISEASES OF THE ABDOMINAL VISCERA.

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PERITONITIS.

THE form of the above disease which I select first for illustration, is chronic peritonitis—an affection generally very insidious in its onset and development, protracted in duration, and in one form at least, almost inevitably fatal. It may be either of the tuberculous variety, or non-tuberculous, but yet stealthy in its course, and essentially chronic in character.

Tuberculous peritonitis is but an expression of the tuberculous diathesis. In attending, therefore, to the local disorder, the constitutional character of the malady must not be lost sight of. Case 1 may be taken as a good typical specimen. An individual, probably about the age of puberty, with unfavourable antecedents in the way of family history, and perhaps early indications of struma, such as enlarged glands, characteristic aspect, and imperfect or irregular development, and who has been exposed to exciting causes, as bad diet, impure air, malaria, protracted illness inducing cachexia, &c.,—complains of a series of symptoms which, at first, are not treated with much consideration, but which, as they become more pronounced, give rise to anxiety, and call for medical aid. More or less constant uneasiness in the bowels, occasional griping pains, a sense of discomfort from the weight and pressure of ordinary clothing, sometimes distinct tenderness over some part of the abdomen, a variable appetite, nausea, or a feeling of distension after meals, an irregular but usually relaxed state of bowels, an habitual acceleration of pulse, evidences of impaired nutrition, some constitutional disturbance, are amongst the early symptoms of the disease in question. At this stage, the treatment may be followed by a fallacious appearance of amendment. There is, however, after a time, a fresh outbreak of the disease, followed probably by another lapse into a comparatively quiescent or latent state; and this alternation of illness and health may go on for some months, or a year or two. Recurring and rather intractable diarrhœa is, in my experience, the most characteristic feature of the disease in its earlier stages. The symptoms may for a considerable period be slight, but serious mischief is going on in the peritoneum, secondarily implicating the intestines and their functions, until at last the disease exhibits itself more actively, and leaves no doubt as to its real nature. In the advanced stages of the malady, there are various local, functional, and constitutional symptoms by which the diagnosis may be established. There is more or less tenderness over the abdomen, limited sometimes to either or both iliac regions, or some other point, and perhaps not to be detected, save on deep and sudden pressure. The cavity is generally distended, the distension being at times in part tympanitic, but chiefly due to the presence of morbid products and fluid effusion. On examining the abdomen, its surface will be found to be irregular or lumpy, and palpation will detect fluctuation, either general or localized by adhesions. Dr. Symonds has well described the peculiar doughy feeling of the abdomen, and the movement *en masse* of parietes and viscera which are frequently met with in this form of peritonitis. A rigid state of the recti muscles has been noticed as occurring in this disease. I have observed such, but have not found it to be persistent. It may be due to irritation reflected from the seat of pain, or may be induced, almost unconsciously, by the patient, in order to ward off pressure. On engaging the patient in conversation, I have found such rigidity disappear. Functional derangement of the alimentary canal exhibits itself in impaired appetite with uneasiness after food, nausea or vomiting, and diarrhœa, which become more and more constant and intractable. The motions are usually copious, of pulpy consistence, bilious, or of pale yellow colour, slimy, and generally very offensive. The tongue is either furred or red at the margin, or glazed and dryish. As the disease progresses, the constitutional character of the affection becomes more evident; the pulse increases in frequency, and becomes weaker; the skin is usually harsh and dry; the pains in the abdomen and diarrhœa are also now most troublesome. The effects of exhausting discharges and impaired nutrition are shown in the progressive emaciation and debility; and, at length, the patient sinks exhausted, but with full possession of the intellectual faculties to the last. Sometimes acute inflammation is suddenly set up, and a more rapid termination then ensues. There is not usually any disease in the lungs, at least not of an active character. Indications of disease in these organs materially facilitate the diagnosis.

On inspection after death, we find the effects of peritoneal inflammation in lymph-products causing, perhaps, the gluing of the intestines together and to the abdominal parietes, and in more or less effusion of serum, which is generally turbid, sanguineous, or puriform, variable in quantity, and affected in position by the nature and extent of adhesions. Tuberculous deposit is found in one of the three forms noticed by Rokitanski: either as grey, semi-transparent, miliary tubercle, distinct or aggregated; or in the form of cheesy masses, varying in size and form; or imbedded in older lymph exudation. This distinguished pathologist considers the tubercle in the first of these forms to be the primary deposit; in the second, to be the result of a conversion of inflammatory product; whilst in the third, an exudation originally free from tubercle, under the tuberculous diathesis, becomes a nidus for it. There is generally, in this disease, a pale and friable state of the coats of the intestines. There may also be tuberculous disease of the mesenteric glands, or of those of the intestines, or of one of the abdominal viscera or lungs. The disease usually attacks individuals in the earlier periods of life, and is not unfrequently met with in strumous females in whom menstruation has not occurred at the proper age.

Case 1.—*Tuberculous Peritonitis.*—H. T——, a Welshman, aged twenty, of lymphatic temperament, was admitted into the *Dreadnought* on Dec. 1st, 1856. His family history was unfavourable, some immediate relatives having died at an early age, but of what disease he did not know. In 1855, when at Constantinople, he had fever with enteritic complication; and six months afterwards, in returning from Archangel, he suffered from diarrhœa. When admitted, he was in a cachectic condition, somewhat emaciated, and suffering from diarrhœa; passing rather bulky, spongy evacuations, with slime, and exhibiting a deficiency of bile. He says that he is usually well at sea, but always suffers from diarrhœa when on shore. He was ordered dilute sulphuric acid with opium, three times a day; grey powder with Dover's powder, in small doses, night and morning; milk diet and beef-tea; and to remain in bed. After a few days the stools were improved in character, but still frequent and loose; and tincture of catechu and decoction of log-wood were substituted for the acid.

Dec. 17th.—Stools less frequent and more bilious, but still relaxed. The patient exhibits a marked anæmic and cachectic condition, with no increase of flesh. Ordered ordinary diet, and the compound iron mixture, with a pill of acetate of lead and opium, three times a day.

21st.—Bowels still relaxed, especially at night, with griping pains. Ordered a starch and opium injection, to be administered at night. This was repeated every other night with marked relief.

Jan. 18th, 1857.—Stools less frequent, but fetid, slimy, and deficient in bile. Little or no improvement in flesh or power. Ordered full diet, four ounces of wine, and the nitro-muriatic acid with chloric ether and infusion of gentian, three times a day.

20th.—Has distinct febrile action, dry skin, hectic patch on the cheeks, rapid and rather sharp pulse, and complains of more diarrhœa, much griping pain in the bowels, and general tenderness of the abdomen. Being unable to take solid food, he was put upon milk diet. A linseed-meal poultice, sprinkled with mustard, was directed to be applied over the entire abdomen; and he was ordered ten grains of Dover's powder at night, and the acetate of lead and opium three times a day.

22nd.—Febrile symptoms, griping, and diarrhœa relieved, but there is still distinct tenderness over the entire abdomen, more especially over the hypogastric and iliac regions, where there is also hardness and irregularity of surface. Ordered the citrate of iron and quinine, with cod-liver oil, twice a day; to keep in bed, and a hot poultice to be kept applied, by way of fomentation, over the entire abdomen. He continued on this plan, being one day better, another worse, the stools continuing loose, fetid, slimy, and irregularly bilious, up to Feb. 15th, when the peritoneal symptoms became more distinct and acute. There was now considerable tenderness on pressure, especially over the regions already indicated, and there was also a circumscribed hypogastric tumour, presenting the character of a distended bladder, but which was proved not to be such by catheterizing. There was dullness on percussion over this, but deep-seated fluctuation on palpation, and some bulging in the right lumbar and iliac regions.

Feb. 22nd.—In no respect better, save that he was not suffering so much peritoneal pain; hypogastric hardness more extended; pulse rapid and weak; hectic fever, increasing emaciation and loss of power. From this time he continued to get worse, suffering from wasting hectic, diarrhœa, &c. The symptoms were treated by different remedies, and his powers sustained by beaf-tea, wine, gallic wine mixture, &c.; counter-irritants in form of sinapisms, turpentine stupes, blisters, &c., being applied to the abdomen, but without any advantage accruing. The soothing treatment alone was adhered to, as matters were drawing to a close. He died on March 19th.

Inspection.—Body much emaciated; thoracic viscera healthy.—Liver: Peritoneal covering tuberculous in several places; substance congested and mottled, but without any distinct deposit of tubercle.—Gall-bladder full of black, viscid bile. The omemtum and intestines were firmly glued to the abdominal parietes and to each other, and thickly crowded with patches and nodules of cheesy, yellowish tubercle. In the right iliac fossa, and extending over the hypogastric region, was conglomerated a bundle of small intestine, feeling like a solid mass, and accounting for the hypogastric tumour. Between the adhesions fluid of a turbid and puriform appearance was effused. The coats of the intestines, and especially of the larger ones, were softened and very lacerable.

That there is a *non-tuberculous* form of peritonitis, essentially chronic in character from its outset, there can be no doubt, although it is scarcely recognised by some systematic writers on medicine. Most of the cases recorded by Dr. Abercrombie are of the tuberculous variety, or of the disease in connexion with tabes mesenterica. Andral alludes to cases of chronic peritonitis, in which the abdomen retains its softness, and in which there is perhaps no pain, so that the nature of the disease is overlooked until the occurrence of ascites. Dr. Hodgkin observes that the form of the disease in question, which is accompanied by copious effusion, simulating ascites, occurs without any appearance of tubercle. Dr. Morehead, in his valuable work, "Researches on Disease in India," introduces an account by Mr. Scott, of the Bombay army, of a form of chronic peritonitis which occurred in a regiment stationed at Aden, "at a time when, from defective dietetic and other arrangements, a scorbutic taint was prevalent amongst the native classes there, and rheumatic affections were common." The form of the disease observed under these circumstances was characterized by pain in some parts of the abdomen, increased by pressure, but never amounting to great tenderness; sometimes, merely a pricking or burning sensation over the fore part of the abdomen; want of appetite, and distension of stomach after the slightest meal; a natural or slightly-relaxed state of bowels; absence of febrile symptoms. After a time, ascites occured, and in some cases there was anasarca of the face and limbs. The liver was found occasionally to be congested and enlarged. The cases lasted for a few months, and generally terminated fatally. On inspection, the peritoneum was found to present an opaque-white appearance, and there were extensive deposits of coagulable lymph between the intestines. The coats of the stomach were usually thickened, and the liver was frequently diseased. One of the peculiar features of the non-tuberculous form is, that it may run its course with very little, or a complete absence of pain. Andral notices this peculiarity, and likens cases in which it is met with to certain cases of pleuritis which commence, become developed, and terminate in the formation of vast purulent collections, without the patient having ever felt any pain. In illustration of this point, Mr. Corner directed my attention to a case under the care of Dr. Barnes, of typhoid fever with enteric ulceration and hæmorrhage from the bowels, which ended in death. There was no stupor or indication of cerebral implication. The patient had no pain or tenderness on pressure for some days prior to death, yet on inspection, there was some turbid fluid effused into the peritoneum, the intestines were glued together by recent lymph, and there was a coat of soft, cacoplastic lymph over the serous investment of the ulcerated portion of ileum. The non-tuberculous variety of chronic peritonitis would appear to be distinguished from the tuberculous by some or all of the following peculiarities:

1. It is not associated with the external indications of the tuberculous diathesis.
2. It is more insidious in its commencement and course than the tuberculous variety, and up to its later stages is unattended with any material constitutional disturbance.
3. There is wanting the intractable diarrhœa, which is generally a prominent symptom of the tuberculous variety.
4. It generally results in much more extensive fluid effusion; in fact, in ascites.

CASE 2.—*Chronic Non-tuberculous Peritonitis.*—Thos. S——, aged fifty, an Englishman, admitted into the *Dreadnought* on August 5th, 1857. Has been at times very intemperate; has never had dysentery, nor any symptoms indicative of any acute attack, either peritonæal or hepatic, though he says that he has suffered occasionally from slight pains in the bowels. He was discharging his duties as usual up to a few weeks back, when his belly began to swell. Fourteen days previously the legs were somewhat swollen, but the swelling rapidly subsided. Abdominal cavity much distended, and dull on percussion over its entire extent, the sense of fluctuation on palpation being very distinct; no tenderness on pressure at any point; superficial veins gorged; no jaundice; no bile in the urine, which is also free from albumen; stools bilious, and, though loose, healthy in appearance; no particular frequency of pulse; complexion clear, with a slight flush on the cheeks: much emaciation and loss of strength. Ordered, extract of taraxacum, ten grains; spirits of nitric ether, fifteen minims; compound decoction of broom, an ounce and a half, three times a day; a drachm of compound jalap powder every morning, milk diet with beef-tea, and four ounces of gin.

Aug. 19th.—Ascites but little, if at all, relieved. Ordered a third of a grain of elaterium, which produced several evacuations, but not of the copious fluid character to be desired.

On the 24th, he was ordered a grain of iodide of mercury every night and morning. On the 28th, there was much irritability of stomach, with rejection of food, and vomiting subsequently of mucus and bile, and he was prescribed the alkaline effervescing draught, with five drops of dilute hydrocyanic acid. This gave relief for a time; but the sickness again returned, his powers became more and more reduced, and emaciation more marked, and he died on September 6th, the intellect remaining clear to the close.

Inspection.—Lungs on both sides congested and œdematous, but with no trace of tubercle; pleuræ slightly adherent. Peritonæal cavity contained about two gallons of clear serum. Parietal layer of peritoneum much thickened; viscera covered with a thin layer of lymph, gluing together the small intestines, which were of a dark colour, and deficient in resiliency. The great omentum was contracted, and contained old lymph effusions. Liver and spleen healthy, but connected to the diaphragm by old lymph bands. Coats of stomach much thickened by lymph exudation. Other viscera normal. No appearance of tuberculous deposit anywhere.

The intemperate habits of the individual, the absence of abdominal pain and tenderness, the readily detected fluctuation and extensive effusion and the unyielding character of the latter, rendered it difficult to diagnose the above case from one of cirrhosis of the liver, which it appeared we had to deal with. On the other hand, the uniform dulness on percussion, with an amount of effusion, which, though extensive, would not have prevented the intestines from giving resonance at the most elevated part had they not been bound down; the total absence of any functional hepatic symptoms, or of local indications of contracted liver, and the clear complexion, were features tolerably diagnostic of effusion from chronic peritonitis.

Before I allude to the treatment of the chronic varieties of peritonitis, I shall give illustrations of the disease in the acute form.

The more or less severe pain, increased on pressure and by the movements of breathing and coughing, by the passage of flatus, &c.; the small, sharp, rapid pulse; the hot, dry skin; the the peculiar decubitus; the anxious, collapsed countenance—are ordinary features of acute peritonitis with which every medical man is familiar. Looking at the anatomical relations of the peritoneum, it will be readily understood how inflammation of it may, from contiguity of structure, implicate functionally one or all of the abdominal viscera, when localized in its serous investment, or may simulate disease of any organ. By thus bearing in mind the relations of the membrane, the vomiting or hiccup, constipation and tympanitis, the hepatic symptoms, the partial or complete suppression of urine, the frequent or difficult micturition, which may accompany an attack of peritonitis, are explained. The disease in its idiopathic form at least, is generally preceded by malaise, chills, or rigors. After a more or less rapid course, it may end fatally, or yield to vigorous treatment, or may merge into a chronic state. Bright injection of the peritoneum, adhesions of omentum to intestines and of the convolutions of these, deposits of soft lymph or pus, a greater or less effusion of clear or purulent serum, are the appearances met with on inspection after death.

CASE 3.—*Acute Peritonitis neglected at the outset.*—M. C—— was admitted into the *Dreadnought* on Feb. 2nd, 1856. He had been suffering for five days from pain in the abdomen and vomiting of all ingesta. He presented on admission, a dusky, haggard look; his skin was clammy, pulse rapid and scarcely perceptible, and his tongue covered with a thick brownish, and dry fur. He was ordered warmth to the surface and defusible stimuli.

Feb. 3rd.—Has passed a restless night, although he has been easy compared with his previous state. Has not been sick, his bowels have acted freely, and there has been copious micturition.—Two P.M.: Is troubled with constant hiccup and vomiting; there is increased pain and tenderness in the abdomen and tympanitis; he has rallied from the state of collapse, and the nature of the attack is now evident. Pulse 98, and still very thready. Ordered thirty leeches to the abdomen, and opium and calomel every four hours. At seven P.M., as the vomiting was unabated, the quantity of opiate was increased, and a drop of creasote added. At eleven P.M. vomiting continued. Ordered a large blister to the abdomen and ice *ad libitum.*

4th, Nine A.M.: Vomiting has ceased; pulse very small and compressible; skin colder and moist; pupils contracted; some rambling but no drowsiness. The creasote and a portion of the opium were omitted; ordered brandy every two hours. No urine had been passed since the night of admission, but only about half an ounce followed the introduction of the catheter. Slight reaction ensued upon the administration of the brandy, but collapse soon after succeeded, and he died at six o'clock, his faculties being clear to the last.

Inspection.—Body in good condition. Chest viscera healthy. A quantity of sero-purulent fluid in the abdomen. Peritoneum exhibits vivid inflammatory injection, and in either inguinal region has a velvety appearance. Intestines slightly adherent from recent lymph, and the omentum glued to the intestines. Remaining viscera healthy.

My brother, Mr. Nathaniel Ward, had referred me to the following case, which was communicated by him to the Pathological Society, and which I now cite, illustrative of acute peritonitis:—

CASE 3.—*Perforating Ulcer of Vermiform Process, caused by a Bristle; Violent Peritonitis; Death.*—A gentleman aged twenty-seven, of temperate habits, on his arrival home, five miles from London, was seized with violent rigors. Having accidentally gone by the wrong train, he had been exposed some time on the railway platform, and had felt cold and chilly prior to the occurrence of what he termed this attack of ague. The rigors occurred on the following day, and he then complained of pain in the belly. These symptoms continued during the next day, and on the fourth day after his seizure, he was seen by Dr. George Jackson of Tottenham, who, on careful examination of the abdomen, detected a peculiarly tender part in the vicinity of the right iliac region, and which yielded a duller sound on percussion than the remainder of the abdominal walls. The patient on this day complained of great debility, great pain in the right iliac region, darting through to his back, and he vomited on several occasions dark-green, bile-like fluid. On the fifth day, the symptoms had become more severe; the pain in the abdomen amounted to agony; he was restless; the breathing was hurried; and the only position he could keep himself in was the sitting, with the thighs drawn up. The treatment, which consisted in the use of leeches, calomel, and opium, occasional injections, and surface counter-irritation, produced no appreciable relief, and the symptoms rapidly augmented in intensity, with the addition of constant hiccup. He was seen by Dr. T. Blundell and Mr. Ward. He died on the seventh night from the onset of the attack, excessive restlessness, dyspnœa, profuse perspiration, increased abdominal tympanitis, and suppression of urine for two days, having preceded dissolution.

Inspection.—Escape of a quantity of thick purulent fluid on opening into the abdomen. Parietal peritoneum adherent to viscera, and these to each other. Peritonitis most intense over cæcum and lower part of ileum. On turning aside the former, a small abscess was exposed between it and the loose tissue in the iliac fossa. Protruding through that part of the wall of the abscess in relation with the cæcum was a small, worn-down bristle, about the third of an inch long, that had apparently belonged to an old tooth-brush. This bristle was found to have ulcerated through the vermiform appendix, a probe passed through the appendix coming out where the bristle was, in the centre of the abscess. Beyond this, for a quarter of an inch, the coats of the vermiform appendix were sloughy, and the appendix was behind and adherent to the cæcum.

An individual who has been suffering from more or less prominent symptoms of gastric disorder, or from dysentery, or who is in the advanced stage of phthisis, or convalescent from typhoid fever, is suddenly seized with excruciating pain in the belly. When seen by the medical attendant, his abdomen is found to be exquisitely tender; there is perhaps painful micturition; the pulse is rapid and sharp at first, but soon becoming thready; the countenance is intensely anxious; and the previous history and present symptoms point to the peritonitis from perforation. The disease, thus lighted up, runs rapidly on, in a few hours or a day or so, to a fatal termination. After death, the peritoneum is found to exhibit signs of acute inflammation, and to contain serum, rendered thick and turbid by the escaped contents of the perforated intestine. Any sudden jerking movement, coughing, sneezing, straining, &c., may determine the rupture. In one of the cases I shall cite, it would seem to have been caused by the movements of an ascaris.

Case 4.—*Peritonitis from perforation. Ulceration of entire tract of large and small intestine.*—Thomas L——, aged twenty-two, was brought on board the *Dreadnought* on the 28th of September, 1857, in an emaciated and exhausted state, and with symptoms of acute peritonitis, which had come on suddenly. He was ordered immediately an injection of starch and opium, a grain of opium (to be repeated at short intervals), and wine and beef-tea; but he rapidly sank, and died a few hours after admission. He gave a history of old-standing dysentery and constant diarrhœa, and considered his condition to have been aggravated by exposure to weather during his passage home from the East Indies. The provisions on board his ship were good, but there was a deficient supply of lime-juice.

Inspection.—Body wasted; lungs crowded with miliary tubercles, some in a state of softening; peritoneal cavity contained about a quart of turbid fluid, and a round worm which had escaped through a perforation in the small intestine; recent peritonitis causing adhesion of the small intestines, and bands passing between the two layers of peritoneum; stomach healthy, but containing another ascaris; duodenum the seat of a number of small circular ulcers, about a third of an inch in diameter, with black bases; and along the entire course of the jejunum and ilium, at intervals, were similar ulcers, and others of elliptical form situated chiefly on the ridges of the valvulæ conniventes, one having perforated the coats. Three cicatrices of oval ulcers occupied the site of Peyer's glands. The mucous membrane of the commencement of the jejunum was blanched and softened, looking as if it had been macerated. The large intestine contained numerous ulcers, irregular in outline, some with inflamed everted edges, others evidently cicatrizing; the surface of all the ulcers being covered with a soot-like carbonaceous deposit, through which could be seen, here and there, the circular muscular fibres. There were also several minute circles of black pigment surrounding a white centre, which was not one of the solitary glands. The cæcum was most affected with ulceration, the rectum least so, and in this portion of intestine was a third ascaris. The black bases of the ulcers along the entire canal were prominently visible through the serous coat before the intestines were opened into. Liver rather pale, but healthly; spleen somewhat engorged and friable; other viscera healthy.

The above case is valuable not merely as illustrating the subject in connexion with which it is introduced. It presents other features pathologically interesting. It exhibits the dysenteric process in its more severe form, and in the large ulcers with carbonaceous bases, shows the analogy of this process, as pointed out by Rokitansky, with the corrosion and destruction of mucous tissue by caustic acids. From the history that could be elicited from the man of his previous ailments, he did not appear to have ever suffered from typhoid fever, so that the intestinal ulceration was probably of the tuberculous character. This view of the matter is, indeed, strengthened by the extensive tubercular disease met with in the lungs. The process of cicatrization was well exemplified in some of the ulcers, and the completed reparative process in the cicatrices occupying the site of Peyer's patches. It is scarcely worth while entertaining the question, whether the ascaris lumbricoides, met with in the peritoneum, found its way there through the perforated intestine before or after death.

The following case appeared some years since in The Lancet, but is introduced here as affording a good example of peritonitis from perforation:—

Case 5.—*Peritonitis from perforating ulcer of the stomach.*—W. H——, a carman, forty years of age, who had suffered from rather obscure symptoms of gastric affection, was seized a little before one on a Tuesday morning with excruciating pain in the abdomen, more especially referred to the epigastric region, but attended by so violent a spasm of the abdominal muscles as greatly to mask the more immediate seat of pain. These symptoms were accompanied by incessant vomiting, constipation, a small, frequent, rather wiry pulse, and general coldness of the surface. His countenance was expressive of great distress, and he could scarcely attend or reply to questions put to him.

When first seen, a full opiate was administered with a view of relieving the spasm. After a lapse of two hours, reaction had, to a certain extent, taken place; the surface warmer, and more force in the pulse; and, as the pain and spasm continued without abatement, some blood was abstracted, and the opiate repeated. The bleeding produced temporary relaxation of the abdominal muscles, and alleviation of the pain. After a short period, however, the symptoms returned in their original intensity, and an injection of gruel and opium was administered, but without relief. He continued in the greatest agony during the whole day, and expired between eleven and twelve on the Tuesday night, about twenty-three hours from the commencement of the attack.

Inspection.—The abdominal cavity contained about a quart of fluid, of the colour and consistence of thin pea-soup. The peritoneum exhibited marks of recent inflammation; and the intestines were slightly adherent to each other, and to the abdominal parietes. The stomach was collapsed, and exhibited in its greater curvature, towards the pylorus, an ulcer of irregular shape, but with smooth, thickened edges. This had destroyed the inner coats, leaving only the serous investment, which had given way, forming an aperture through which the contents of the stomach had escaped, and which was sufficiently large to allow the introduction of a finger.

In cases such as those last cited, there is but little to be anticipated but a speedy termination in death; and all that can be done in the way of treatment is to alleviate, by full and frequently-repeated doses of opium, the fearful suffering of the patient. Where there is severe spasm, and the prostration is not too great, relief is sometimes obtained by the abstraction of blood. That there is a faint prospect of cure would seem to be proved by the cases narrated by Dr. Stokes, of Dublin, and Dr. Wood, of Philadelphia. Such cure could only be effected by localization of the effusion and adhesion of the perforated bowel to contiguous structure; and this would be best brought about by the opiates which are administered for the relief of pain.

Promptitude and energy of treatment are required at the outset of an attack of acute peritonitis. Local or general bleeding, according to the case we have to deal with, and from having recourse to which a small pulse and appearance of nervous prostration should not deter us; a full dose of opium immediately after the abstraction of blood, followed by calomel and opium every three or four hours, are the means best calculated to arrest the disease in its early stage, and at the same time to promote the absorption of fluid or solid products of inflammation. I cannot give my assent to the administration of a sharp purgative at the commencement of the attack, which has been advised by some practitioners, in order to effect revulsion to the mucous membrane. I can only consider the exhibition of a purgative justifiable when there are distinct indications of considerable fæcal accumulation calculated to keep up irritation. The constipation is due to spasm of the muscular coat, induced by the inflammation of the contiguous serous structure; when such inflammation is relieved by the remedies pointed out, the bowels will act without aid. Purgatives indiscriminately given increase the peristaltic action of the intestines, and thus irritate the inflamed peritoneum, and may cause rupture of recent adhesions. If the bowels do not act when the more acute symptoms have been relieved, and especially if there be tympanitis, an injection may be administered with advantage. It is desirable to ensure the specific action of mercury, and this may be facilitated by applying the mercurial ointment, spread upon lint, over the abdomen. Blistering, which is objectionable at first, may be used with good effect when the disease has passed the more acute stage. The symptoms resulting in the course of an attack of acute peritonitis, from implication of any particular viscus, as vomiting, difficult micturition, &c., must be met by appropriate remedies. Ice is a valuable remedy where there is distressing vomiting and hiccup. The diet at first must consist solely of small quantities of farinaceous articles, of barley-water, and of iced or acidulated water; but if the pulse becomes thready, the surface cold, the tongue dry and brownish, the countenance Hippocratic, and other indications of prostration ensue, we must have recourse to diffusible stimuli.

In the chronic peritonitis resulting from the acute attack, and in that form which I have designated as non-tuberculous, the treatment must consist in the exhibition of remedies best calculated to arrest insidious inflammatory action, and to promote the absorption of effused lymph and serum. Repeated blistering or the application of a few leeches, if there be much tenderness, frictions with mercurial or iodine ointments, or stimulating liniments, or the application of turpentine stupes or mustard plasters, are the local remedies by which inflammatory action may be arrested and diverted from the serous membrane, and the action of absorbents stimulated. The indications will also be fulfilled by the internal exhibition of the milder preparations of mercury and iodine, either singly or in combination, and by the removal of fluid from the blood through the action of diuretics. Opium is a valuable remedy for the relief of pain and the arrest of excessive alvine evacuations: where the skin is dry, the best form is the Dover's powder.

The treatment of the local affection in tuberculous forms differs in no material respect from that of the preceding variety. Mercury must not, however, be given, save for its alterative action. Where there is anæmia, the iodide of iron is a valuable preparation. The intractable diarrhœa requires peculiar attention; the mineral astringents, especially the sulphate of copper, have more control here than the vegetable. Opium is, of course, a useful and necessary adjunct. When the functions of the liver are sluggish, small doses of mercury-and-chalk in conjunction with Dover's powder may be prescribed, or the nitro-muriatic acid may be given internally or applied over the surface of the abdomen. It must not be forgotten, however, that the peritoneal affection is, as I have already remarked, but an expression of a constitutional disease, to the relief of which our efforts must be directed. We must endeavour, then, to arrest the progress of the disease in its earlier stages by having recourse to measures calculated to improve the constitutional condition. We must bring to our aid those influences the exclusion of which acts so largely in determining the local development of hitherto latent tuberculosis. Foremost among such influences is pure air. When the means of the patient permit, residence during the winter months in the comparatively mild climate of some of our southern watering-places is desirable. If this is impracticable, the air of the room in which the patient dwells should be kept at an equable but not too high temperature—from 55° to 60°. There is no greater mistake than that which is often committed, if patients are left to act upon their own suggestions, of converting a room into an oven. An over-heated, close atmosphere not only relaxes the strength, but materially favours the cacoplastic or aplastic deposits, and promotes the disorganization of tissues in a low state of vitality. The local affection renders active exercise scarcely practicable, but that involved in steady gestation over a smooth road is generally pretty well borne, and attended with benefit. The patient in the finer seasons of the year should be much out of doors, not only for the sake of the pure air, but that he may be exposed to the vivifying and invigorating influence of light. The remedial action of light has been much overlooked, simply, I believe, because its ordinary action as a vital agent cannot be exactly reduced to some chemical rule-of-three. In Southey's Memoirs a pertinent anecdote is related of a little girl who, after an attack of small-pox, exhibited symptoms of struma, with a paralytic affection of one side. On the advice of some friend, she was daily placed outside in the sunshine; and one day, when she had been carried out as usual in her little arm-chair, and left there to see her brothers play, she rose from her seat, and, to the astonishment of every one, walked into the house. From this time her recovery was rapid. "It is by no means improbable," adds Southey, "that the sunshine really effected the cure." The diet in tuberculous peritonitis should be simple and nourishing. In the early stage of the disease, if the appetite is good, meat may be given once or twice a day with advantage. If there be any indications of disease in the mesenteric glands, nourishing fluids, as milk, beef-tea, arrowroot, &c., will be more likely to be assimilated than food of a more solid character. Cod-liver oil given in gradually-increased doses is a most valuable nutriment, and is much better tolerated than might be expected. Sometimes the empty stomach rejects it, and it may then be given soon after mealtime. But little need be said in regard to clothing, beyond insisting upon the importance of flannel next to the skin, in order to promote the functions of this, and determine to the surface. In the advanced stage of the disease, when the hope of curing or even arresting it is excluded, we must deal with symptoms as they occur, vary our treatment with the varying state of the patient, and, by timely administration of anodynes, prevent any avoidable suffering.

Finsbury-circus, 1858.

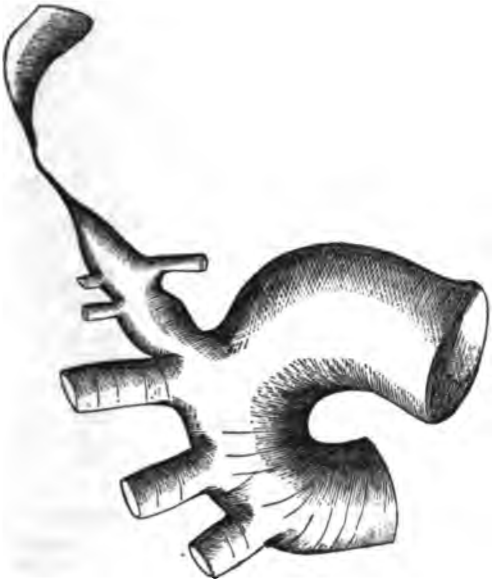
ANEURISM AT THE ROOT OF THE NECK TREATED BY PRESSURE ON THE CAROTID AND SUBCLAVIAN TRUNKS.

By A. M. Edwards, Esq., F.R.C.S.E.,

DEMONSTRATOR OF ANATOMY IN THE UNIVERSITY OF EDINBURGH.

In the Lancet of January 9th, 1858, I published the case of Mrs. L——, who had been treated by me for aneurism at the root of the neck as long ago as September, 1856. I stated that this patient was the subject of aortic aneurism, but that immediate danger was apprehended from the bursting of another aneurism, which was apparently close to the bifurcation of the innominata artery, and that I had made trial of compression upon the carotid and subclavian trunks with very beneficial effects, as the tumour, after first seeming to increase, had hardened, and then gradually diminished in size until the date at which I thought myself justified in making the case public, when it was not larger than a hazel-nut. A few weeks after I wrote the description alluded to, no trace of the tumour could be detected; the transversalis colli artery could be felt enlarged in the posterior triangle; the pulse in the right wrist was more feeble than in the left. In the latter end of March she began to suffer from paroxysms of dyspnœa and nocturnal fits of neuralgia. The aortic aneurism was evidently enlarging, and though not extending laterally, could be more distinctly heard and felt through the sternum. Opiates were given freely to relieve pain, and she soon got into the habit of inhaling a little chloroform to allay spasm of the larynx, which remedy always brought her speedy relief. On the morning of March 31st, after a hearty breakfast, she suddenly died.

Thirty-six hours after death I examined the body in presence of Prof. Laycock, Dr. Benjamin Simpson, and Mr. Crumpe. On removing the upper part of the sternum, that bone was found absorbed to nearly half its thickness by pressure of an aneurism, the size of an apple, upon the anterior surface of the ascending arch of the aorta. The tissue of the heart was fatty, and the aortic valves diseased. The innominata artery was, as is often the case, slightly dilated at its bifurcation; the common carotid was healthy. The right subclavian was slightly dilated at its origin; the branches coming from the first part of its course were enlarged, and immediately beyond the thyroid axis it began to taper to a point, and ended in a band of fibrous tissue, under which I put my finger, and found it conducted me to behind the scalenus anticus. On dividing this muscle, the artery was found commencing in a point, and gradually enlarging until it regained its normal calibre; this obliterated portion involved about an inch and a half of the vessel. The innominata was unusually short, and on comparing the external surface markings with the dissection, the point at which the artery was obliterated, corresponded, we found, with the situation in which the aneurismal tumour had formerly existed. This, then, was an unquestionable case of cure of a subclavian aneurism by pressure beyond the sac, and, so far as I can discover, the first case in which this method of treatment has been applied to anurisms at the root of the neck.



View of vessels: posterior aspect.

Velpeau alludes in his "Médecine Opératoire" to a case of inguinal aneurism, in which a M. Vernet tried distal pressure, but soon discarded it, as the pulsations in the sac increased in violence. Velpeau adds this remark:—"C'est une ressource qui a généralement été blâmée, même par ceux qui adoptent les idées de Brasdor pour la ligature; et qui, pourtant, ne parait pas devoir être absolument rejetée. Par exemple, on avait à traiter un anéurysme au dessus duquel il fût impossible, ou au moins très, dangereux, de placer un appareil compressif ou une ligature." The late Dr. Bellingham alludes to distal compression in his work "On Compression in Aneurism," saying that "in the few trials which have been made, it has been found rather to aggravate the symptoms—to cause the blood to be transmitted with greater force to the sac, in consequence of which the size of the aneurism increased and its progress became more rapid." He then quotes Vernet's case and one of his own, both inguinal aneurisms. In the case I have related, the tumour increased in size only for the first few days; it then consolidated, and gradually disappeared. No doubt, the situation of the aneurism was very favourable for at least the safety of the sac, as the branches of the first part of the subclavian would act like so many safety-valves in relieving the artery of the additional pressure from the obstruction to the course of the blood along it. Though it must also be remembered, as Mr. Wardrop showed long ago, "that, in the first instance, the force of the current of blood is not directed exclusively into those branches of the subclavian which remain open between the cardiac side of the ligature and the innominata, but must be diffused into all the contiguous branches of the aorta in the ratio of their different sizes." It was also favourable as being to the distal side of these branches, so that there could be no current of blood through or *past* the aneurismal portion of the artery, which is one of the conditions in which Mr. Lawrence considers that a cure may be reasonably expected after Wardrop's operation. "If," says Mr. Lawrence, "an aneurism be situated at the lower part of the carotid artery, suppose the common carotid artery be then tied, we know that no branch is given off between the ligature and the aneurism by means of which the circulation in the tumour can be carried on; then, if it were tied effectually, there could be no current of blood through the tumour that the coagulation might take place necessary for the cure of the aneurism."

Dr. Bellingham showed that "when a cure is effected by compression, the vessel is obliterated *only* at the seat of the aneurism, and the artery at this part is eventually converted into an impervious ligamentous band." So it was in the case I have just related. I do not think that *distal* compression comes exactly into the same class of surgical remedies as compression on the cardiac side of the tumour. But the former may be tried in those hopeless cases of aneurism where you cannot get at the cardiac side with a compress or a ligature, or where, as in the case of Mrs. L——, there is another disease present preventing any cutting operation. Under these circumstances, distal compression may be tried, and if it does not seem productive of benefit, there is no necessity to continue it, and neither surgeon nor patient are compromised; in short, it renders Wardrop's method more legitimate than formerly, because it does not involve the same risks.

Until I examined Mrs. L—— after death, I imagined her aneurism to be either on the innominata or on the subclavian at its origin. The error arose, I suppose, from the size of the tumour, its bulging towards the middle line, and from the shortness of the innominate trunk, which caused the subclavian to ascend more vertically than usual to get between the scaleni.

This variety is common in *dissecting-rooms*. However, it made no difference in the principles of treatment.

Edinburgh, 1858.

ON ERETHISMUS TROPICUS.

By J. R. Taylor, Esq., Fort Pitt,

DEPUTY-INSPECTOR OF HOSPITALS.

Under this name I have proposed* henceforth to collect in our Indian military medical returns, all cases of that peculiar disease, or state of system, which exhibits the acute effects of continued high tropical temperature on the European, and which I believe to be an exhausting excitation of the system by continued tropical heat. Sporadic cases of this disease are not uncommon in India every hot season, and occasionally an European regiment is prostrated by an epidemic or endemic outbreak of it.

The common features of the disease, or state of system I allude to, are as follows, and in enumerating them I am bearing in mind instances that came more immediately under my own observation whilst serving in India from 1842 to 1854. The attack is generally more or less sudden, and the symptoms of the premonitory stage are rapidly succeeded by coma, from which the patient rarely recovers. A soldier, apparently in good health, and at some ordinary occupation in his barrack-room; or on sentry, or guard, in a close and very hot though shaded place; or on, or after, a march in the hot season, or hot hour of the day; or in hospital for dysentery or some other disease; or a lady in the cabin of a boat on the Ganges in the hot season, is suddenly seized with overpowering lassitude, and feelings of oppression from the great heat of the weather; there is fulness and distress about the præcordia, perhaps sickness at the stomach; generally pain in the head or eyes; the skin is at the same time hot, and "a burning heat inside" may be complained of; the pulse is more or less strong, according to the general previous condition of the individual. These symptoms last but a very short time. Perhaps in ten minutes from the onset of the disease, the patient is insensible, and at the same time he may be convulsed. Deep coma succeeds, and from this stage recovery is very rare. During this coma the breathing may be stertorous and apoplectic, or gasping or otherwise. The most extraordinary symptom in these cases is the progressive rising heat of skin as the disease advances, and even for some time after death. It must have been an instance of this peculiar affection that Dr. Livingstone met with in Africa. He relates* that he was called to see the body of a Portuguese lady, which continued so extraordinarily hot six hours after death, that her decease seemed to him for that period doubtful, and he accordingly delayed the funeral till signs of decomposition appeared.

I shall now, in illustration of this disease, give in detail the notes I possess of a very singular and instructive case of it which came under my care at Dinapore in May, 1850.

Sergeant J. R——, H.M.'s 80th Regt., aged thirty-three, a highly-respectable and intelligent man, and several years regimental schoolmaster, was admitted into hospital on the 19th of May, for phthisis pulmonalis. This sergeant returned from Darjeeling (a hill sanitary station) in March last, where he had been the previous hot season, on account of debility and emaciation, with threatenings of tubercular disease of the lungs. He had not derived benefit by his sojourn in the hills. Shortly after leaving the depôt there, he says that he twice vomited a quantity of black clotted blood. After returning to Dinapore he felt better, and resumed his occupations in the school, continuing at them till the day before admission, when, in consequence of having written a note to his commanding officer, betraying a curious morbid sensibility, he was sent to hospital under observation. Except a marked vivacity of manner and of speech, there was nothing indicative of mental disorder. Debility and emaciation had, however, obviously increased. He had much cough and purulent expectoration, and the physical signs declared the existence of the advanced stages of tubercular disease of the lungs.

In the state above described, he remained with little or no change till five P.M. on the 1st of June, when stepping across the ward to another patient's bed, he was suddenly overpowered by a sense of extreme debility. His skin became remarkably hot; pulse wiry, quick, and small; respiration difficult, and of a gasping nature, with occasional cough. Insensibility almost immediately ensued, and death followed at half-past six P.M., or in one hour and a half from the onset of this peculiar affection. The thermometer at the time, in the shade outside the ward, was 98°. On the bulb being applied to the sternum and to the abdomen, the mercury rose immediately to 104°, and during the next ten minutes after death stood as high as 108°. Above this the temperature did not rise, but the heat left the body very slowly, for at the post-mortem examination the next morning, fourteen hours after death, the heat of

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[*] To Dr. Farr, of the Registrar-General's Office.

[*] Missionary Travels in South Africa, p. 652.

the contents of the thorax was very remarkable, and the body, it is to be observed, had been lying exposed in the dead-house during the night. When the thermometer, applied to the sternum and abdomen, indicated a temperature of 108°, the head and feet were of an acrid heat, but less in degree.

The post-mortem appearances in this case were: —Externally, the body was very emaciated, and much discoloured by advancing decomposition.—Head: Upon removing the dura mater, two rather long bands of adhesion connected the inner surface of that membrane to the centre of the upper surface of the left hemisphere; there was some thickening of the arachnoid at the points connected by these bands; general milky opacity of the surface of both hemispheres. Upon removing the brain, there was about an ounce of bloody serum in the occipital cavities; cerebral substance not abnormal in appearance or consistence. A small rounded mass of caseo-calcareous matter, about the size of a pea, was found in the plexus choroides on either side; two or three drops of bloody serum in the anterior cornu of each lateral ventricle. Meninges not unusually injected.—Thorax: Strong old adhesions of pleura throughout the right side. On introducing the hand to remove the lungs there was still a remarkable heat of these parts. Right lung a mass of tubercular disease, with vomicæ; one large cavity in the upper lobe broken into in detaching the lungs from the body; left lung similarly diseased, but to a less extent. Heart pale, very flabby, otherwise normal.—Abdomen: Liver very much enlarged, of a yellow-ochre colour, and mottled on the surface; sections of a similar appearance, and soft and fleshy; gall-bladder distended with dark bile; spleen rather large; intestines contracted, pale externally, no ulceration; some appearance of congestion in cæcum and ascending colon; pancreas healthy; urinary organs healthy.

There are some curious and instructive instances of this disease in a sporadic form to be found in the *Madras Quarterly Medical Journal*, vol. iii.,* by several medical officers. It would be very advisable, I think, under present prospects of the service in India, to have the cases alluded to, together with the few other records of cases and epidemics of this disease reprinted in a convenient form, and placed in the hands of our many brethren now commencing their labours in India, who will be found, not only inexperienced, but not readily convinced, of the dangers to the system of the European by continued tropical heat, and who have probably hitherto received no information of the disease to which, by this paper, I hope to attract their attention. They may be thus saved much anxiety and consternation when they meet with it, and be induced to furnish us that further enlightenment on the subject which is required to gain for it a due and very necessary share of notice in our regular treatises on Indian diseases.

An epidemic of the disease in question was one of the first epidemics that I met with in India. I was not prepared for it by having previously met with any information concerning it, and its novelty, its intensity, the suddenness of its onset, the incontrollableness of its grasp, and its carrying off the finest and the healthiest men, created great consternation in the regiment, which had not then been a year in the country.

The epidemic commenced on the 2nd of June, at half-past four P.M., and between that hour and eleven P.M. twenty-eight men had been admitted and eight died from this cause alone. It prevailed during twenty days, and occasioned 115 admissions and sixteen deaths. The regiment had only shaken off an epidemic of cholera five days previous to the outbreak of this anonymous, fatal, and unexpected disease. Cases of ictus solis and apoplexy had been frequent for some days. I see in the returns of that period six admissions and four deaths by the former, and three admissions and one death by the latter disease. The average strength of the regiment at the time was 921. No commissioned officers were attacked, but this class of rank does not always escape. The first admissions by this epidemic were cases in which the patients were either in a comatose state when brought to the hospital, or fell into that state very shortly after admission. Two patients in hospital were of the number first attacked, and one of them died in the course of an hour. One man who had been brought to hospital the day before with symptoms due to inebriation had scarcely left the hospital on this fatal evening, apparently quite well, when he was brought back in a comatose state, from which he could not be recovered. Four other patients were admitted that evening in the same comatose state, and died in periods of from twenty minutes to three hours. The generality of the patients fortunately came under treatment in an earlier and more manageable stage of the disease. The symptoms in these cases were, weakness, pains in the limbs, great oppression of the præcordia, and, to use the patients' own words, "a burning pain inside." An indefinite kind of pain in the head was always admitted upon inquiry, and sometimes, but not in many instances, was the most prominent cause of complaint. Some suffered from sickness of the stomach. The bowels did not seem to be disordered in any of the cases except those admitted in the apoplectic stage, or which subsequently fell into that stage. In these cases, copious watery bilious stools were passed involuntarily. The tongue was generally clean. But the most marked and characteristic symptom in all the cases, without exception, was a dry heat of skin, burning to the touch; a heat very different from any febrile exaltation of temperature that has come under my observation. I regret that, in the hurry and anxiety of the moment, it escaped me to ascertain the degree of heat by a thermometer. This extraordinary increase of temperature obtained equally, if not to a greater degree, in the cases admitted comatose, and, further, continued undiminished for a considerable time after death.

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* See also a paper by Mr. Russell, 73rd Regt., *Med. Gazette*, vol. ii., 1835-6.

The sensation of burning heat inside, and the high temperature of the body, were very striking symptoms. The isothermalising powers in the system seemed overcome, and heat accumulating, was acting as it were a poison. The pulse was invariably found full, frequent, and strong; and the subjects of the disease were with few exceptions large-chested, muscular, and fat men. Of the first ten carried off by the epidemic, two were the finest-built men in the regiment. All but two of the ten were remarkably stout and fat. The faces of the patients admitted on the evening of the 2nd were not observed to be flushed, nor their eyes suffused; but probably these appearances escaped notice, from the patients being seen by candle-light. Cases admitted the next day were observed to present these symptoms. The pupils in the comatose cases were, perhaps, a little dilated, but not very obviously so. In no instance was there delirium or raving. Pain in the head, heaviness, stupor, coma, marked the course of the cerebral affection in all the earlier cases which proved fatal. In the fatal cases of later occurrence, the patients, when roused, wandered in mind, but the delirium was never spontaneous. One patient only recovered from the comatose stage of the disease. The character of the mental affection which succeeded the coma in this case was a sort of sullenness. The patient, when fairly roused into speaking, would quietly ask the bystanders to smother him. On some occasions, he seemed more sane, but determined not to speak. This patient was in hospital many weeks. In another instance the patient recovered partially, was delirious for some days, but finally died comatose. Omitting these two cases last noticed, the average duration of the others not terminating fatally was 5·7 days. The fatal cases, with the above exception terminated in from twenty minutes to six hours.

As is observed of other epidemics, the disease assumed a milder character as it disappeared, and at last cases of the epidemic could not be distinguished from ordinary admissions by common continued fever. The last fatal case, which occurred on the 19th of June, or eighteenth day of the epidemic, partook, however, of the severity of the cases admitted on the 2nd, the patient becoming comatose, and dying in the course of four hours.

The treatment in all the cases consisted in the copious abstraction of blood, the cold bath and cold affusion to the shaved head. The latter measure was the one chiefly relied on, and it was carried into effect by drawing the patient up on his cot till the back of the head rested on the bar which supports the bolster. The vertex then projected, and *bheestie*[*] after *bheestie* poured a stream of water upon it from his *mussuck* or leather bag. Local bloodletting by cupping on the temples or opening the temporal artery, was often practised at the same time with the treatment just mentioned. When sickness at stomach was felt, an emetic was administered. Purgatives were invariably given when the patient could swallow; blisters to the nape of the neck or to the crown of the head were sometimes employed during the progress of the disease. In the cases before mentioned, where the patients survived the comatose stage, and in one instance recovered, mercury was given. In the latter case it produced salivation, and seemed of service. The cold affusion of the head in this and other cases, was often repeated with advantage.

The post-mortem examinations of the men who died on the evening of the 2nd of June were made the next morning. The stout build of the different corpses was very striking. A brown frothy fluid was issuing from the mouth of most of them. The bodies exhibited a good deal of livid discoloration about the face and shoulders, as if the mode of death had been by suffocation.

In only one case of the eight was there any quantity of dark blood effused on reflecting the scalp; nor on removing the calvarium did there appear to be any conjestion of the veins and sinuses of the dura mater. In all, the tunica arachnoidea had lost some of its transparency, and the pia mater was in a state of hyperæmia. Between this membrane and the cerebral substance patches of effused blood were found in four cases. In three the effused blood was within the arachnoid, and was more extensive. In the remaining case no sanguineous effusion could be found, but there was a plentiful effusion of serum at the base of the brain and in the lateral ventricles, in which last situation the serum was tinged with blood. Effusion into the ventricles was observed in all cases, but it never exceeded two drachms in each ventricle. The cerebral substance was of ordinary firmness, tenacity, and colour. Vessels divided on making sections bled freely. The thoracic and abdominal viscera were healthy in structure, but the former were gorged with dark fluid blood. Heart, omentum, and intestines loaded with fat. Along the whole course of the mucous membrane of the small intestines there was a yellow, fatty, or gelatinous secretion, also an appearance of eruption from enlargement of the sub-mucous glands.

At the post-mortem examination of cases which proved fatal subsequently to the eight just described, similar abnormal appearances presented themselves. There was rarely, however, any effusion of blood, and the state of the meninges appeared more that resulting from inflammatory action.

This epidemic was undoubtedly the direct morbid effect of the high temperature of the season. Instead of the regular hot winds from the N.W., the wind during the month of May had been very constantly N.E., and the *tatties* were consequently of little service. The thermometer at the end of May averaged 105° in the shade, and from the unfavourable direction and nature of the wind for working the tatties the heat in barracks could be but little diminished. On the first of June the wind was still N.E. and light, with the thermometer at 104°. The sensation of heat was intense. On the morning of the 2nd, the day of the outbreak of the epidemic, the wind came round to the N. W., and was strong and scorching. The thermometer in a covered passage facing N.E. showed a temperature of 108° at two P.M.

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[*] Native water-carriers.

This disease, or morbid state of the system, generated by excessive heat of weather, and occurring in an epidemic form, has fallen under the observation of several medical officers in India. The following extract from a report by Dr. Henderson, published in the second volume of the *Madras Medical Journal*, describes an outbreak of the disease occurring on the march :—

"In addition to the overpowering heat of the sun, we had to encounter an excessively hot wind, and to march no less a distance than twenty-one miles in place of fourteen, as we were told. The consequence was that the head of the column did not reach its ground until nine o'clock, and the rear then extended for many miles along an open country.

"About eight o'clock, a most melancholy scene commenced. Men were seen to drop down, and instantly expire; others, less severely attacked, were saved by timely and copious bleeding. Towards eleven, I became so seriously indisposed myself that I was obliged to desist from further exertions on the road, and proceed to the camp. There I found three tents set apart for the hospital, already filled with sick, several of whom were in a dying state. On the part of the commanding officer, Lieut.-Col. Sale, every exertion had been made, as his former knowledge of the climate had taught him to expect much mischief from such exposure at this season of the year." (This was in April, and sixty miles above Calcutta.) "The doolies,* as they arrived, were sent back, and twenty country carts were procured from a neighbouring village, and dispatched with all haste to assist in bringing the men up. Every hour added to our melancholy situation; for notwithstanding our utmost exertions, the day ended, I regret to say, with no less a loss than eighteen lives, and left us with sixty-three sick in hospital. Our loss, on this occasion, with one exception, was entirely confined to the recruits, and the chief part of the sickness that followed was also confined to them.

"Three more fatal cases occurred the next day, making a total loss of twenty-one lives, from one unfortunate, and, I may add, unnecessary long march."

Dr. Henderson entered his fatal cases under the head "apoplexy;" and the cases that recovered he classed as "remittent fever." I chose "phrenitis" as the term expressing more nearly the nature of the disease. Mr. Lindsay, who, in the seventh volume of the "Transactions of the Medical and Physical Society of Calcutta," describes an epidemic of the disease amongst the Hon. East India Company's invalids at Chunar, in which seventeen died out of a strength of 200, calls it "apoplexy of the hot winds." Dr. Mouat describes it as a regular "*causus*, or ardent fever." Deputy-Inspector-General Murray, then principal medical officer at Madras, suggested "*eukephalitis ab insolatione*," as a name for the disease.† These and other medical officers serving in India have perceived the peculiar nature of the disease, and the expediency of having a separate heading for these cases in our returns. The late Dr. Mouat, than whom there has been, perhaps, no more experienced nor better professionally qualified man in India, speaks of the disease as arising from "excessive heat acting upon the excited and irritable frame of the unseasoned European, having symptoms peculiar to itself, running a different course to ordinary fever, exhibiting peculiarities in its pathology, as regards the state of the sanguiferous system, and requiring, in some respects, a treatment especially adapted to its peculiar state of excitement."

An epidemic of erethismus tropicus appears to have occurred in the 80th Regiment at Agra, in May and June, 1845, and I am aware that two or more regiments suffered severely by this disease at the opening of the Punjaub campaign, 1848–'49. My regiment, in August, 1848, on the march from Kupowler to Ferozepore, lost one man by this disease; and such was the intense heat of the weather at that season, that I believe our loss would have been much greater had not the commanding officer, at my suggestion, adopted an extraordinarily segregated order of march. Niebuhr, extolling the discipline of the Romans, tells us they were aware that nothing was so fatiguing to the soldiers as to march along the road in columns, and accordingly avoided it as much as they could. The fact is, that "crowding" out of doors, especially in a tropical climate, is to be condemned as well as crowding in barracks. There is with our military men too much fancy for close order of ranks and companies and columns. I regret to see no caution against this in the hygienic suggestions approved and published to the Indian army by Sir Colin Campbell.† Several explanations have been offered to account for the fact that cavalry and artillery are more healthy than infantry. Now, one reason appears to me to be the less compacted or congregated order of the men of the two former arms during their parades and military movements, and the generally smaller masses of which the parades of these classes of troops are composed. The artillery-man at his gun, and the cavalry soldier on his horse or at sword exercise on foot, must be admitted to be more healthily circumstanced than the infantry soldier, moving with his arms and chest cramped, breathing the foul atmosphere pervading closely-locked ranks, close columns, squares, and such like showy military manœuvres. These remarks apply more especially to troops in India. The truth of it is confirmed by the frequent "falling out" on parade, and the complete recovery almost immediately upon leaving the parade-ground. No one who has moved with a close column of infantry in India, or indeed elsewhere, can be skeptical of the unwholesome atmosphere surrounding such masses of men. On a march the difference of alacrity in the men leading and those in rear of the column is thus no doubt to be explained.

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* Beds carried by four natives.

* See the papers in the second and third volumes of the "Madras Medical Journal," communicated by Mr. Murray.

† *The Times*, December 11th, 1857.

And now a few words as to the treatment of cases of erethismus tropicus. Had I fortunately, before the epidemic I have described at Gazeepore in 1843, met with the records of this disease to which I have referred, I should have been more moderate in the employment of venesection. The full, strong pulse, the evident congestion of the contents of the thorax and cranium, the heat of skin, are such as seem irresistibly to call for loss of blood; but I should say that, generally speaking, this measure is not advisable. In cases of this disease occurring in robust subjects, who have been passing the time in idleness, and not under fatigue, a moderate bleeding will be expedient. But where this disease appears amongst soldiers under circumstances of fatigue and exposure to tropical heat, loss of blood is to be avoided. During the active operations at Martaban and Rangoon, in April, 1852, numerous cases of the acute effects of high and continued tropical temperature came under my care. In every instance the soldier was immediately stripped of all but his trousers, and bheesties then commenced pouring a stream of water, first on the patient's head, then over his throat, chest, and epigastrium, and subsequently along the spine. This cold affusion was continued till decided signs of restoration showed themselves. In those cases accompanied with sickness at stomach, effervescing draughts, sometimes with compound spirit of sulphuric ether, were found very grateful and reviving, and, in anticipation of this, a large supply of prepared effervescing powders had been included in the light surgical equipment for the field. The cases of insensibility, sometimes lasting from one to three hours, and in some instances attended with one or more epileptic fits or convulsions were apparently very threatening, and strongly suggestive of the necessity for more active treatment; but former experience of the little or very dubious advantage, if not positive mischief, from loss of blood in such cases, together with the fact of the circumstances under which these cases occurred, having been calculated to produce a condition of impoverishment of blood and of exhaustion, were considerations which haply withheld me from all treatment but stripping and cold affusion in the shade. This simple treatment was successful, not one case terminating fatally. The other medical officers on the ground who followed this plan of treatment expressed their gratification at the results. Cold affusion then, plentiful and long, and uninterruptedly continued, is the essential means of treatment in these cases; and considering the probability of their frequent occurrence under the present prospects of military service in India, and the need of our soldiers there at all times for water, I hope the authorities will not be misled by the commander-in-chief's hygienic instructions to turn their attention to encumbering the men with brass *lotas* and strings. Let the authorities rather take good care that every regiment is well supplied with bheesties, who, to my certain knowledge, are the best behaved of all classes of Hindoos, and have never hesitated to follow into action the companies to which they were attached, and to keep the men supplied with water; whereas, without the bheestie, the soldiers, from painful thirst, could not help falling out from the front in numbers, and going perhaps half a mile or more in the rear for water. Each soldier in my time always had his water-can at his side, and it was the bheesties' business to take care there was always water in it.

With respect to the after-treatment of cases of the disease under notice, I need only say that it is very much the same as required in ordinary cases of fever.

P.S.—Since forwarding the preceding remarks, I have had the pleasure of reading a paper by Dr. G. S. Beatson, "On Coup-de-Soleil, its causes and treatment." The term "coup-de-soleil" appears to me objectionable, not only as limiting the cases of the disease I am describing to those which may occur under direct exposure to the sun's rays, but as being also generally applied to probably a very different pathological state, due to such direct exposure more particularly of the head, and when the atmosphere may not be of tropical temperature. Now, cases of the disease I am describing as "erethismus tropicus" occur even amongst those who have not been out of a thickly roofed and walled building for several hours, or even days. But Dr. Beatson's opinion as to treatment fully and most opportunely confirms the assertion I have made, that the medical officers who were in the field with me in Burmah, and who restricted themselves nearly, if not altogether, to the treatment by cold affusion, notwithstanding symptoms strongly urging to venesection, expressed themselves much gratified at the successful results.

I may refer here also to the remarks of Dr. Gordon, surgeon of the 10th Regiment, as confirming the advantages of the treatment I have advocated.

Mr. James Ranald Martin does not overlook the occurrence in India of the disease I am alluding to. His observations respecting it are to be found under the head of "Ardent Fever of the hot season of Bengal," and are confined nearly to a notice of the records by Drs. Mouat and Henderson already referred to. Mr. Martin, however, is an advocate for the treatment by cold affusion. I object to the term "ardent fever" for these cases, as the disease appears to me no more, but perhaps about as much, a fever as cholera is; but the propriety of calling cholera cases cold fever cases would not be admitted for a moment.

Dr. Charles Morehead, in his "Clinical Researches on the Diseases of India," treats of the peculiar disease under consideration under the head of "Cerebral Affections caused by Elevation of Temperature." This I think is objectionable, as tending to assign to the disease an unduly local character, rather than treating it, as it certainly is, as a very peculiar general disorder of the system. Perhaps Dr. Morehead's view of the disease as a cerebral affection leads him to advocate venesection in cases coming under treatment before the stage of insensibility—a practice which, though exceptionably admissible as I have stated, is, I think, by no means to be taken as a rule.

I have, in a former part of this paper, alluded to a case of remarkable heat of the body after death, being probably a case of erethismus tropicus, related by Dr. Livingstone as having come under his observation at Killimare, on the river Zambesi, near the east coast of Africa. I will now quote, from a report[*] by Mr. Paget, a paragraph indicating the occurrence of similar cases in the southern states of America:—

"Sundry observations are recorded by Dr. Dowler and other American surgeons[†] of considerable increase of temperature of the surface of the body after death from yellow fever and coup-de-soleil. Within a few minutes after death the temperature is said to rise to 102°, and then to increase steadily to 106° or 108°, or even to 113°. Thus it may remain for from four to six hours, being usually higher at the thigh and abdomen than in the heart; then it gradually subsides to the temperature of the surrounding medium. The cases are said to have all occurred in the summer, in a temperature of at least 80°, but they are very imperfectly related." J. R. T.

Fort Pitt, August, 1858.

OBSERVATIONS ON THE ARCUS SENILIS, OR FATTY DEGENERATION OF THE CORNEA.

By Edwin Canton, Esq., F.R.C.S.,

SURGEON TO THE CHARING CROSS HOSPITAL; CONSULTING-SURGEON TO THE KENT OPHTHALMIC HOSPITAL, MAIDSTONE.

> "Quamvis forté aliquis adhuc velit, in minoribus natu cartilagines molles esse, in senioribus verò ita subinde indurati vt fragilis ac fribilis ossis naturam referant, quod potissimum laryngis accidit cartilaginibus, et illis quas superiores costæ educunt."—Vesalius: Anatomia, p. 4. Venet., 1604.

PART X.

(*Continued from Sept. No., p.* 188.)

Fatty and calcareous degeneration of the Costal and Laryngeal Cartilages in association with the Arcus Senilis.—I pass, now, to a consideration of the condition of the cartilages of the larynx in the old man, and in those who have become prematurely aged.[‡]

These parts are well known to become gradually ossified; and the conversion continues, as a common rule, to increase steadily in extent—progressing, *pari passu*, with the advance of years—until it is, at length, found that that which was originally a cartilaginous, has now been changed into an osseous framework.[*] Equally with the costal cartilages is the time at which this alteration commences uncertain, and variously stated by different authors. I have already pointed out how speedily will irritation in the immediate neighbourhood of the larynx—whether originating from within or without—induce this change,[†] and have glanced also at those general circumstances which commonly influence the accession, and regulate the progress of this bony transformation. The calcification occurs later in life in the female than in the male,[‡] and the usual order pursued is—first, in the thyroid; secondly, in the cricoid; and, lastly, in the arytenoid cartilages. The epiglottis is unaffected; but, in regard to this point, observers differ, and I shall have again to revert to this subject.

In the thyroid cartilage, calcareous degeneration commences generally in its cornua and posterior margins, and by degrees invades the lower border, extending upwards and forwards through the ala, and the last portions to become altered are those lying a little external to the mesial notch. The cricoid cartilage is stated by Sharpey, and Ellis,[§] with their accustomed accuracy, to become first ossified at its upper border upon each side, near the two posterior articular eminences, and the ossification invades the lateral parts of the cartilage before encroaching on it either in front or behind. Ossification of the arytenoid cartilages begins at their bases, and thence progresses towards their apices. Though calcification of these latter cartilages is of more infrequent occurrence than the same change in the thyroid and cricoid, the observations of some authors in regard to them is scarcely correct. Thus Cloquet[‖] states that they are only to be seen in that condition in very advanced age; Gross[¶] speaks of their ossification as extremely rare; whilst Andral[**] says, "I am not aware that the arytenoid cartilages have ever been found ossified." Such also is the result of the experience of Morgagni, (*loc. cit.* p. 29,) who says, "Multòque etiam sœpius totam arytenoidum basim cellulosam vidi, et medullari liquore turgentem, quamvis istas cartilagines videre osseas potuerim nunquam." The *fact* is that it is by no means uncommon for ossification of the arytenoid cartilages to occur, and I have now before me several specimens wherein this change has taken place, to a greater or less extent, in persons who have either not reached, have arrived at, or only just passed the middle period of life, such changes not being due to irritation set up by the neighbouring structures, which I have found on dissection to be perfectly healthy. Moreover, the *cornicula laryngis* are susceptible of calcification—a circumstance which I do not find alluded to by any author. A short time ago, in preparing the larynx of a man, aged forty-two, who had died of phthisis, I discovered that, in addition to a very advanced degree of bony change in the thyroid, cricoid, and arytenoid cartilages, the appendices of Santorini presented each in its interior, and at about the centre, a well-formed ossific nucleus.

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[*] Brit. and For. Med. Rev., vol. xxi. p. 557; "Animal Heat."

[†] B. Dowler (New Orleans), in Boston Medical Journal, August 6th, 1845; in the New York Journal of Medicine, Sept. 1845; in the Medical Examiner, Sept. 1845.

[‡] "Old age may commence before advanced years have been attained; even at thirty-five years of age defective nutrition may have fully established the attributes of the old man."—Brodhurst: Of the Crystalline Lens and Cataract. p. 150. Lond. 1850.

[*] "Sed mihi certe nihil frequentior in laryngis dissectionibus oblatum est, quam senum, aut etiam senectutem inclinantium hominum thyroidem et cricoidem aut osseas aut osseientes videre."—Morgagni: Adversar. Anatom., i., p. 29. Lug. Bat., 1723.

"Cartilagines laryngis quinque sunt: quæ in scenescentibus aliquando instar ossium indurantur: *unde aliqui suffocationis periculum in patibulis declinaverunt.*"—Bartholinus: Anatom., lib. ii., p. 442. Lug. Bat., 1674.

[†] "The ossification of the laryngeal cartilages is often excited and advanced by inflammations which extend to the perichondrium from without, especially the inflammation which occurs at the base of tubercular ulcers, and in the neighbourhood of softening tubercle."—Rokitansky: Man. of Path. Anatom., vol. iii., p. 281.

"Exudation in the mucous membrane and submucous tissue of the air-passages, as in *tuberculosis*, chronic catarrh, reiterated pneumonia, &c., will injuriously affect, from the inner side, the nutrition of the cartilage, whilst towards the *perichondrium*, on the outer aspect, the nutrition is less interfered with—the circulation in the nutritive vessels of the perichondrium suffering no interruption."—Wedl: Rudiments of Path. Histology, p. 187. Syd. Soc. transl., 1855.

[‡] "In viris, tamen, hæc *degeneratio* frequentior quam in fæminis ob laxiorem, quæ ipsis propria est, totius corporis laryngis habitum."—Van Heekeron: De Osteogenesi Præternaturali, p. 76. Lug. Bat., 1797.

[§] Elements of Anatomy. 6th ed., vol. iii. p. 307. Lond., 1856.

[‖] A System of Human Anatomy. Transl. by Knox. p. 389. Edin., 1831.

[¶] Elements of Pathol. Anatomy. 3rd ed., p. 401. Philadel., 1857.

[**] Treatise on Pathol. Anat. Transl. by Townsend and West. Vol. ii. p. 493. Lond., 1829.

However complete this ossification of the laryngeal cartilages may become, those portions which enter more immediately into the composition of the crico-thyroid and crico-arytenoid articulations always remain unaffected, and anchylosis at these joints has never been witnessed. An observation by Sandifort[*] may here find place: "In viri robustissimi cadavere totum asperæ arteriæ caput penitus osseum fuit, una cum opposita epiglottide, sic ut vel acutissimo cultro ne minima pars tolli potuerit: basis tamen epiglottidis, articuli cricoideæ et arytenoidearum cartilaginum, persisterant mobiles."

In regard to the epiglottis,—a *fibro*-cartilaginous structure,—I may state that even in the most perfect specimen of calcification of the laryngeal cartilages that I have examined, I have never seen this one to be otherwise than in an unaltered condition. This is in accordance with the experience of Cruveilhier,[†] and the majority of anatomists and pathologists. Three hundred years ago Columbus[‡] wrote: "Vero si humanum inspexeris, præsertim in consistente ætate, procul dubio ossicula omnia, ex quibus, conficitur, agnosces *epiglottide excepta* quæ fistulam tegit." There are some, however, who have made contrary statements, and Cloquet (*loc. cit.*, p. 339), whilst allowing its rarity, says: "When it does happen, it presents a number of small, bony nuclei, irregularly disseminated and separated by very visible areolæ." Van Heekeren remarks (*loc. cit.*, p. 76): "Si quid mea valeat observatio, in epiglottide distincte observavi nucleum osseum in meditullio formatum, ita ut ab omni parte cartilagine esset inclusus." Gross (*loc. cit.*, p. 401) believes that of ossification of the epiglottis there is hardly a well-marked case on record; and Andral (*loc. cit.*, vol. ii. p. 492), in acknowledging its infrequency, states that a "minor degree of induration is by no means uncommon, the effect of which is to render it less movable, so that it is with difficulty bent down to protect the aperture of the larynx." A similar observation is made by Pauw,[*] who is thus referred to by Sandifort (*loc. cit.*, lib. 3, cap. ii., p. 43): "Conspexit tres, quibus mortis fuit causo, quod adeo induruisset epiglottis, ut flexi non valuerit, et deglutitionem penitus impediverit." Morgagni, although he has frequently found the cartilages of the larynx bony in old men, never met with ossification of the epiglottis. He does not doubt, however, that it may sometimes become less flexible and yielding.[†]

Before describing the histological condition of the calcified parts of the larynx, together with the state of the adjoining cartilage, which has not as yet undergone, but is inclining to, such conversion, I may, with a view of rendering the subject more complete, devote a short space to the consideration of analogous changes occurring in the tracheal and bronchial rings in the progress of age; and I should be tempted to apologise for the extent to which I have charged my account with quotations from the works of ancient and modern authorities, but that I find in the former much that pertains to and is correct on the present points; whilst in the latter there is sometimes to be detected a laxity or even incorrectness of statement but little in accordance with the improved pathology of more recent date; indeed, it may not infrequently be found that "what is true is not new, and what is new is not true." Were I endeavouring to frame a description of the calcified and fattily degenerate condition of the costal and laryngeal cartilages in *age* only, I might content myself with a bare account and unencumbered text, but I trust to be enabled to develop, in the course of the present inquiry, some curious and interesting facts respecting the existence of similar changes in persons who have prematurely suffered from impairment of nutrition—in whom, too, fatty degeneration, as in ordinary age, has set its arciform or circular stamp on the cornea, and in whom the alteration will be found to have correspondingly affected, besides those sections of the cartilaginous system to which I more particularly refer, the arterial trunks and branches, in the coats of which it is well known that fatty and calcareous degeneration are often to be detected in association with one another. It is, then, by a collation of scattered facts, by establishing a relationship amongst previously isolated parts, and on articulation of these *disjuncta membra*, by adding increased strength to the whole, through amplified inquiry, that we may hope to succeed in gaining the right path towards *generalization*, which so often brings us still nearer to the desirable goal of *simplicity*.

The following discrepancy of opinion is rather remarkable:—Seiler[*] observes: "Arteriæ asperæ et bronchiorum cartilagines haud raro in osseas mutantur;" whereas Cloquet (*loc. cit.*, p. 623) says: "The tracheal and bronchial rings seldom ossify, even in the most advanced age." Morgagni (*loc. cit.*, vol. i., p. 324) remarks: "These cartilages become bony sometimes, even before the person is far advanced in years." Gross (*loc. cit.*, p. 377,) on the contrary, states that "the rings of the trachea, being of a fibro-cartilaginous texture, seldom ossify." The older authorities are in the right; and it is by no means unusual to find that the above parts are, even in comparatively young subjects, more or less ossified, whilst in old men, in whom the laryngeal cartilages have to a great extent become bony, the ossification of the tracheal rings may be complete. Of this Gross gives an example, in stating that, "when this transformation takes place it usually occurs in small points, which coalescing, may embrace at length the entire rings, as I have witnessed, not long ago, in a man seventy-five years of age. The different tissues of the tube were remarkably dense, inelastic, and brittle, requiring only slight traction to tear them. All the rings were completely ossified." In a man, aged eighty, Littre[†] found, in addition to ossification of some of the abdominal bloodvessels, that "les cartilages du larinx, et les anneaux cartilagineaux de la trachée, et d'une partie de ses bronches l'étoient tout-à-fait ossifiés." Vieussens[‡] relates, that in a female who died at the age of eighty-four, and in whom there was found extensive ossification of the aorta in its whole length, M. Deidier "observa encore que tous les anneaux des bronches du pûmon étoient devenus osseux; aussi ne pouvoit elle jamais se coucher la tête basse sans avoir quelque peine à respirer." The following observation is made by Gernet:—"Incrustationem vero similem ei, quam in cartilaginibus sterni deprehendimus, in alio larynge perspeximus, in quo præter cricoidem et arytenoidas cartilagines etiam asperæ arteriæ, annuli simili crusta investiti deprehendebantur, ita tamen, ut cartilagines ipsas, sub crusta dilitescentes, accurate perspicere potuerimus."

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[*] Obs. Anatom. Patholog. Lib. 8. cap. ii. p. 48. Lud. Bat., 1777.

[†] Descrip. Anantom. Transl. in Tweedie's Lib. of Med. Vol. ii. p. 575 Lond., 1841.

[‡] De re Anatomica. Cap. v. p. 100. Venet. 1557.

"At some time beyond the middle period of life the cartilages of the larynx, *except the epiglottis*, and often of the trachea also, become converted into bone."—Cyclop. of Anat. and Physiol. Art., Abnormal Anatomy of the Larynx, by W. H. Potter.

[*] Primitiv. Anatom., p. 10, 24.

[†] De Causis Sedibusq. Morb. Translated by Cooke. Vol. ii. p. 8. Lond., 1822.

"Epiglottidem adeo quandoque induratam deprehendi, ut loqueles abolitionem inferat: malum hoc. incurable." Barbrette. Anatom. Pract., lib. i. cap. 4. Vide Bonetus. Sepulchretum. vol. i.; De Vittis Vocis et Sermonis, Obs. xxii. p. 478. Genev., 1700.

(*To be continued.*)

REMOVAL OF TWO FIBROUS TUMOURS FROM THE ARM.

By John Adams, Esq., F.R.C.S.,

SURGEON TO THE LONDON HOSPITAL.

On September 2nd, I removed two fibrous tumours from the left arm of a woman, aged fifty-eight. The larger tumour, which was the size of a small Seville orange, had been observed as a small lump twenty years ago at the back of the arm; it had continued to increase very gradually, and sixteen years since she was advised by Mr. Critchett to have it removed by operation, as it then began to give her pain. Lately the pain has materially increased and this is much aggravated when it is struck or roughly handled. She describes the pain as of a shooting, darting character, and readily adopts the suggestion as to its resemblance to an electric shock down the forearm. It gave me the idea of a round fibrous tumour, tolerably movable, but adherent to something beneath, and evidently deeply seated, as I suspected, under the triceps. The operation was performed by making a free cut over and at once down to the tumour, so as to expose its surface, by which its nature was ascertained. A layer of triceps was thinly spread over it, and it adhered firmly to some tendinous tissue beneath, and this rendered it impossible to *enucleate* it without two or three nicks with the scalpel. I accidentally cut through its capsule, and was not a little surprised to see a free jet of blood issue from it. It was requisite to tie three arteries, which came from the point of adhesion, and I observed a slender filament of what I thought to be a nerve lying free in the wound. No damage was done to the spiral nerve, as I proved by requesting her to put her extensors into action. She complained of intense pain during the operation. She declined taking chloroform.

After I had finished the operation, she directed my attention to another tumour about the size of a horsebean beneath the skin, covering the supinator radii longus. I removed it by cutting through the skin and cellular membrane, and found it under the subcutaneous fat. It had given her a great deal of pain, especially when handled, and her account of the pain quite accorded with that of the large tumour. I cut into the larger tumour, and found it to present very remarkable appearances. It was enclosed in a dense fibrous capsule, like an ordinary fibrous tumour; its interior was bluish-red for the most part and gave the idea as if it had been stained throughout with blood. It was not as if blood had been effused or extravasated within it, but as if it was stained with blood. At some parts its tissue appeared broken up, and here its appearance might be said to resemble an apopletic effusion. At the back part there were flakes of a yellowish colour, and close to its point of adhesion there was a deposit of bone. Nothing satisfactory could be ascertained by the microscope beyond its fibrous structure.

I was exceedingly anxious to make out the true nature of this tumour so far as its origin is concerned, having in many instances, to which I shall presently allude, found nerve filaments in connexion with such tumours. In this instance, on carefully tearing off the outer capsule, I distinctly traced a nerve of the size of the lesser cutaneous of the arm, as passing through a distinct groove of the outer capsule, and then spread over and intimately blended with and lost upon an inner capsule, thus clearly proving the origin of this tumour from the nerve. The smaller tumour resembled the ordinary fibrous tumour of the non-malignant class.

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[*] Anatom. Corp. Hum. Senilis, p. 77. Erlang.

[†] Hist. de l'Academ. Roy de Scien., p. 26. Paris, 1706.

[‡] Traité Nouveau de la Structure et des Causes du Mouvement Naturel du Cœur, chap. xvi. p. 109. Toulouse, 1715.

What is the true character of the larger tumour? Is it malignant or non-malignant? Will it recur? I think the tumour is to be arranged under the head of fibrous tumours; and that it is non-malignant. Such tumours are by some pathologists supposed to be neuromata: first, because of the intensity and character of the pain attending them; and next, because of the connexion with a slender nerve filament occasionally, if not invariably met with. Regarding it in this light, it ought to be considered as a fibrous tumour, in my opinion, belonging to the class neuromata. But it is quite clear that some remarkable change had commenced in this tumour; for its comparative vascularity is something very unusual in fibrous tumours, and suggests the idea that, although non-malignant originally it had commenced to undergo a change which might have totally altered its character. Tumours like the present are by no means uninteresting, although sufficiently common; there is occasionally some obscurity about them in consequence of their depth beneath muscles, and the adhesions they now and then form to adjacent structures. Their possible origin from nerve-filaments, or, at any rate, their close connexion with such structures, is a matter of interest. I remember, about four years ago, to have seen a case, in consultation with Mr. Coulson, where a painful tumour, of the size of a walnut, was imbedded in one of the hamstring-muscles, and it was enveloped in so much obscurity that a surgeon of great repute had ordered strapping, &c., with not the slightest benefit; an incision was made over it, and it was removed with the greatest facility. Two slender nerve-filaments were found connected with it. I removed a similar tumour from beneath the vastus internus of a gentleman; it came out with great facility, and there was a slender nerve-filament connected with it. I also removed from the oxilla of a gentleman, a tumour of large size and precisely of the same character. In the attempt to get it out, and whilst using a little force in manipulation, it flew out into the room. There was here also a small nerve-filament connected with it.

The fact of the connexion of these tumours with nerve-filaments, although suggestive, is not altogether conclusive of their origin. Mr. Paget mentions one instance in which he traced with a microscope the filaments of a slender nerve spread out over such a tumour—I presume in a manner similar to the arrangement of the nerve with the tumour in question. I am not prepared altogether to assent to the appellation so frequently given to these tumours, as *painful subcutaneous tumours.* It is quite true that they are often subcutaneous, and generally painful; but there is another description of tumour met with occasionally to which I think the term is more peculiarly applicable. It consist rather of a small subcutaneous swelling, than a distinctly circumscribed tumour, and is *horribly* painful when touched. On removal, it is found to consist of condensed cellular membrane, bloodvessels, and, I dare say, if carefully examined, would be found to contain many nerve-filaments. The whole tissue resembles, in some respects, an erectile tissue. I have removed them from various parts; and the last I saw was dissected from the surface of the tendon of the rectus femoris.

St. Helen's-place, September, 1858.

ON *PEPSINE AND DR. CORVISART. SOME COMMENTS

FROM

David Nelson, M.D.,

FORMERLY PHYSICIAN TO THE QUEEN'S HOSPITAL AND PROFESSOR OF CLINICAL MEDICINE, BIRMINGHAM.

The Lancet for August contains some observations concerning Pepsine and its history, from the pen of Dr. Corvisart, in which my name is introduced in a manner that demands some notice from me. In the first place he commences with the following assertions:

"Artificial digestion, a method of treatment not often used in every-day practice, and an entirely new medicine—viz., pepsine, were adopted in England in 1857, and after having received the cordial support of Dr. Ballard, found in you" (Dr. Chambers, to whom the article is addressed, D. N.) "a zealous and conscientious propagator. This conquest in therapeutics was so little known, so little appreciated in England, even by yourself (Dr. C.), that a year before (1856), in a voluminous work, rich in physiological researches, 'Digestion and its Derangements,' the system of treatment was passed over in entire silence. So long ago as 1854, I had introduced, in a clinical work, entitled 'Dyspepsie et Consomption, usage de la Pepsine,' this medication, which was found exceedingly bold and new, based on rules, whether clinical, pharmaceutical, or as regards doses, so sure and precise that even at present, four years after the publication, they are exactly followed out even by you, sir, both in your practice and professional instruction at St. Mary's Hospital. Several other pamphlets which I have published, and a still greater number of memoirs on pepsine, from the pens of learned and renowned observers, gave their sanction to what I had pointed out as pharmaceutical and clinical principles, founded on clinical observations. (See list of works at the end of this letter.)"

That these assertions of Dr. Corvisart are erroneous as regards England, I shall soon show. As to the lengthened and learned observations which follow, in regard to Dr. Chambers's "activity" upon this subject in 1857, and his "silence" thereon before 1856; and also as regards Dr. Chambers ignoring all labours besides his own and having exhibited so signal a misconception of Galen and other ancients, I almost perfectly agree with Dr. Corvisart: neither shall I hesitate to declare my feeling that Dr. Chambers has got himself, in this matter, on the horns of a dilemma; as either he must read no other articles except his own in The Lancet, or deal with those others very disingenuously. But that is his own concern, and I now come to what Dr. Corvisart says of myself.

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* *Vide* October No., page 260.

In giving the promised list of "Memoirs on Pepsine, from the pens of learned and renowned observers," he begins with one of his own in 1854; then follows the mention of six others from French, Italian, and Swiss authors, in 1855 and 1856; next is named one from Dr. Ballard, in 1856, followed by another by Dr. Chambers in 1857. On none of these does he make any comment, and then he writes as follows:

"1857.—David Nelson: 'Clinical Observations on the Special Application of Liquor Pepsiniæ in Certain Diseases' in the *British Medical Journal*, February and March. This author, although omitting to mention all the publications that preceded his, and which he seems not to have been acquainted with, flatters himself, that owing to his observations, pepsine has taken up its merited rank."

That I have done something of myself in establishing the probable permanency of this remedy in our list of therapeutic agents will not, I presume, be denied by any impartial person well acquainted with the subject. I certainly did notice that, in the lectures of Dr. Chambers upon the history of pepsine, &c., in 1857, my name was never so much as mentioned from beginning to end. It is these same lectures that Dr. Corvisart now attacks, on account of his labours not being noticed therein. For myself I did not feel that anything of the kind was incumbent upon me; for I was persuaded that the "ignoring" would amount to nothing, or worse than nothing, in the minds of the readers of The Lancet, who are everywhere, if not in the minds of the very students to whom the lectures were addressed. Besides which, in this country most men are in the habit of leaving others to judge of their merits, and are contented to labour steadily either in the fields of battle, or of science, without any unnecessary blowing of trumpets, or much care about prizes, or medals, even popularity, as compared with real success in well-doing.

If Dr. Corvisart feels so sure of his position—as he ought to do, so far as I am concerned—if he thinks that I wrote only in 1857, while he wrote in 1854—I am quite at a loss to account for the feeling of bitterness which his words evince while speaking of my said article of 1857. He certainly only expresses the truth when he says I did not seem to be acquainted with the priority of his experiments, and I shall now show that he seems not to have been acquainted with former long labours of mine. Why, it oddly enough happened, that just during the reading of Dr. Corvisart's observations, a medical friend, and a gentleman patient came into my room, the latter having been relieved from urgent and alarming symptoms by means of the liquor pepticus, in 1852, and having presented me with a snuff-box two years afterwards, the date engraven on which is 1854. So far from the paper of 1857, in the *British Medical Journal* being my first, he will find the subject handled by me in The Lancet of January, 1855, in my first paper on Diabetes, which paper was penned in 1854, and mentioned cases treated in 1852, &c. The doctrine of the *modus operandi* is there laid down distinctly, and in set terms—namely, that "the remedy is valuable in acting as a substitute for the morbid deficiency of the natural gastric juice."

In a discussion which subsequently took place in The Lancet, in numbers, during 1856, Dr. Corvisart will also find observations to the following effect—namely, first, that I had based my more extended views upon the foundation of Spallanzani's experiments alone, and the suggestive observations of Baron Haller, under the guidance of the general principles of medicine and philosophy. Secondly, that, "valuable as I knew the remedy to be in diabetes, which, if a terrible, is yet happily a rare disease, I knew it to be far more extensively useful in other more painful, more common, and, in certain instances, equally fatal maladies; and having employed it in one or other form, and in a great multitude and variety of cases, during these several successive years, I could not but feel that my one simple deduction in accordance with the doctrine of artificial substitutions, now rested on so broad and so solid a basis of fact, that it was quite irrefragable and beyond confutation. In short, it was the application of the above principle, with its successful issue, grounded on Spallanzani's demonstrations (and not the introduction of rennet as rennet), that I claimed and sought to establish." Thirdly, that, "on referring to an old edition of Magendie, I found, opposite to those passages which treat of Spallanzani's and Reaumur's experiments, certain notes made by myself in 1846, and to the following effect: 1. 'Haller's view (of digestion) is as rational as our own—viz., maceration and solution in the *fluids* of the stomach, whatsoever such *fluids* may be.' 2. 'Spallanzani's are Haller's prior views carried out in experiment.' 3. 'Query, the application in practice under old age, in chronic disease, and in deficient secretion of gastric juice?'" These speculative thoughts of 1846 were not tested in practice till 1851, and then in a simple manner, but clearly on the one great principle. Other parts of the discussion will show what Dr. Smith and Dr. Gray have done here.

Dr. Corvisart, or any one else who refers to my writings on this subject, will find that they have been the fruit, not of a *few months'* experiments, but of a clinical experience in cases to be estimated by thousands over a series of years, the doctrines having been long carried out in practice before being committed to print. As to any quibbling that may arise concerning the differences between gastric juice, pepsine, liquor pepsiniæ, liquor pepticus, &c., I shall view it as mere childish trifling. Like cinchona, or any other article of the materia medica, we may each have it prepared in such form as seems best to us, under one set of circumstance or another. The principle, and the results in practice, are the grand points;

though, undoubtedly, that preparation is best which secures to us, all the essential elements of the gastric juice, casting aside the mere chemical theory of any abstract essence or ferment. So far as regards priority in the mere mention of such an essence as pepsine by name, Dr. Corvisart will find in Turner's "Chemistry" (edited by Baron Liebig and Dr. Gregory, in 1847), at p. 1292, that "according to Wasmann and other chemists, it (the gastric juice) contains a peculiar principle, pepsine;" but, it is added, "according to Liebig, however, pepsine, as a distinct compound, does not exist." In several conversations which I had with Dr. Gregory upon this subject, during his elaborate experiments upon kreatine, kreatinine, &c., he said to me again and again, that he believed the gastric juice to be some modification of the juice of flesh—a composite material, and not any separable essence. But, however this may be, my own conviction, as a physician, is, that just inasmuch as no artificial chemical combination of the elements of the protean compounds, even with the addition of kreatine, &c., can approach the qualities of a beef-steak or boiled fowl; so no isolation of the fancied chief essence of the gastric glandular fluids can be equal to that preparation which secures to us of necessity all the efficient agents contained in such gastric glandular fluids in their exact natural proportions, be they what they may.

Trusting that Dr. Corvisart will do that justice to others which he claims for himself, I now leave this part of the question in the hands of the profession in both countries to decide as they see fit. I cannot, however, conclude without an allusion to the strange circumstance, that Dr. Corvisart should take credit to himself for having, as he expresses it, "liberally published" the results of the investigations of himself and his apothecary. One can scarcely comprehend the expression of such a sentiment as this. In so sacred a calling as that of the physician, whose doctrines and practice must involve the grave question of life or death to his fellow-beings, the free revelation of all that he knows, for the use of the profession or of mankind, is manifestly incumbent upon him. The celebrated signal words, that "*England expects every man to do his duty*," have grown into a national maxim and whoever acted not in accordance with it in public matters, would be despised amongst us. I do not say that Dr. Corvisart has not done his duty in this matter; we can see that he has laboured, and conveyed the fruits of his labour to others, with much perseverance, learning, and genius; but he need not have openly boasted of it as if it were a work of supererogation.

Colmore-row, Birmingham, Sept. 1858.

A CASE OF FRACTURE OF THE BASE OF THE SKULL.

By C. Clarke Rutherford, Esq.,

ASSISTANT-SURGEON 2ND DRAGOONS.

Private J. M——, of the 2nd Dragoons, aged twenty-two, while exercising a young horse in the barrack yard, was thrown and pitched upon his forehead, taken up insensible, and conveyed to the Regimental Hospital, about ten A.M. on the 2nd instant.

The following symptoms were evident on admission: total unconsciousness and complete loss of power; breathing stertorous; both pupils firmly contracted and insensible to light; skin hot and perspiring; pulse full and compressible. On being put to bed vomiting occurred; the urine dribbled away involuntarily, but the fæces were retained. *There was no hæmorrhage from either ears or nose.* On examination of the head, no fracture of the skull could be detected; considerable ecchymosis of the left eye existed, and there was a small contusion over the left frontal eminence.

The man continued in the same state as when first brought under notice, and died twenty-three hours after the accident.

Autopsy, thirty hours after death.—A contusion over the left frontal eminence and ecchymosis of the left eye; effusion of blood under the left temporal muscle. The dura mater much congested; cerebral surface very vascular, and there were coagula at the base. Sections of brain exhibited bloody puncta in all parts; there was bloody serum in the lateral ventricles, and a clot was found in the left lateral and also in the fifth ventricle. A fracture, without depression, of the squamous portion of the left temporal bone was ascertained, extending internally across the orbital plates of the frontal, and descending into the cribriform lamella of the ethmoid bone.

Portobello Barracks, Dublin, Oct. 1858.

CEPHALIC VERSION IN ARM PRESENTATION.

By Anderson Smith, Esq., M.R.C.S., & L.S.A.

On the 8th instant, at half-past seven P.M. I was summoned to attend E. C——, of Britannia-street, Gray's-inn-road, aged twenty-nine, in her third confinement. On my arrival, I was informed that she had been in labour since nine o'clock in the morning, and that the membranes had recently given way. On examination, I found the os uteri fully dilated, and the right hand and arm presenting. I immediately prepared to search for the feet, as I had done on previous occasions; but reflecting on the large amount of infantile mortality in footling cases, I changed my resolution, and determined, if possible, to replace the arm and bring down the head to the brim of the pelvis; in this attempt I succeeded, and placed it in Nægelè's first position. The malpresentation having been thus rectified, the labour was completed naturally at nine P.M.

I have been induced to publish this case in consequence of my belief that cephalic version is an obstetric operation that has greatly fallen into disuse; but it must be allowed that when it can be performed without much difficulty, and in cases in which the safety of the mother does not call for speedy delivery, it is a procedure infinitely preferable to turning by the feet.

Claremont-square, Oct. 1858.

REPORT OF A CASE OF PLACENTA PRÆVIA, IN WHICH TURNING WAS SUCCESSFULLY RESORTED TO, CHLOROFORM GIVEN WITH ADVANTAGE, AND THE CHILD RESUSCITATED BY THE "READY METHOD."

By E. C. Garland, M.R.C.S., &c., Yeovil.

LATE SENIOR HOUSE-SURGEON TO THE SOUTHERN HOSPITAL, LIVERPOOL.

I was sent for on the evening of June 18th 1858, to see A. B——, aged twenty-nine, taken suddenly ill with flooding. I found her about eight months gone with her eighth child, her previous labours having been good. She stated that she had exerted herself much of late, but had continued well till the present time. She had no pains, but a constant oozing of blood. On examination, I found the os uteri thick and not dilated. There were no symptoms of labour. I ordered her to be kept in the recumbent position and perfectly quiet, the room cool, gave an opiate, and left, intending to call again shortly. I saw her at the end of an hour: all hæmorrhage had ceased, and she felt comfortable. I left directions to be summoned immediately should the hæmorrhage recur.

On seeing the patient the following morning I found there had been no return of the hæmorrhage, and she had passed a good night. I desired her to remain in the recumbent position, and endeavoured to impress upon her the necessity of attending to my directions. She continued free from hæmorrhage during a fortnight, at the end of which period I was again called to see her. I found affairs nearly in the same state as before, and adopted the same treatment, with the like result.

On July 13th, between eight and nine A.M., I was again summoned. Labour had now commenced. There was considerable hæmorrhage; the os uteri was dilated to the size of a half-crown piece; and I found the placenta presenting. As the pains increased I waited a little resolving to act when necessary. I sent for assistance, and succeeded in procuring the aid of Mr. Moore, of West Coker, who chanced to be in Yeovil that day. We met in consultation about half-past eleven A.M. The os uteri was then considerably dilated, and a portion of the placenta was ascertained to be detached towards the sacrum. This accounted for the preceding hæmorrhagic discharges; and as the patient was considerably blanched and anxious to be delivered, the pains also getting weaker, we determined to deliver her. I introduced my left hand along the curvature of the sacrum, ruptured the membranes, and brought down the feet and pelvis of the child. Spasmodic action of the uterus then set in, encircling the body of the child so firmly as to render it difficult, if not dangerous, to proceed. I administered chloroform to the patient, while Mr. Moore attended to the further expulsion of the child. The difficulty was somewhat increased by the face being turned towards the pubis; however, by some manipulation, the arms were got down and the face brought in the proper position, when delivery speedily followed.

We had the satisfaction to find the child alive; it cried once, but almost immediately ceased apparently to live. The cord was tied. Without delay we had recourse to the Ready Method, and after persevering in it for more than fifteen minutes we were gratified to find it had succeeded. The child gradually lost its livid hue, breathed and cried, and soon attained a natural rosy colour.

One feature in the case must not be omitted. The mother did not rally so soon as could be wished, and it was found necessary to watch her for some time, administering cordials and nutriment; but she nevertheless became more and more exhausted. As there was no hæmorrhage observed externally, suspicion arose that there might be internal hæmorrhage. This was ascertained to be the case; and the hand being introduced, a considerable quantity of coagula was removed, when the uterus contracted and all further hæmorrhage ceased. The mother and child are now both doing well.

August, 1858.

ON A CASE OF DEFICIENCY OF DEVELOPMENT OF THE SUPERIOR, POSTERIOR, AND ANTERIOR ASPECT OF THE FŒTUS.

By J. S. Beale, Esq., M.R.C.S.

Mrs. W——, primipara, was delivered of a male child (seven months and a half), which presented the following appearances:—It had no neck, the head being stuck atop of the chest. The occipital bone was flattened down on to the scapulæ. The brain was outside the skull, and contained in a thick membranous cyst, which cyst had several coagula, inside as well. The laminæ of the vertebræ were wanting down to the upper part of the lumbar region, a thin shell of bone being thrown across to protect the spinal marrow; there was no bulging of the contents of the spinal canal. A large, transparent, serous-looking cyst, occupied the abdominal region, through which the liver and intestines could be distinctly seen; the cyst contained a largish quantity of fluid; the umbilical cord was inserted at the lower part of the right side of it, and not centrally. The arms and face were softened through decomposition commencing.

Nothing could be elicited from the patient tending to fix any cause (through fright or otherwise) to elucidate the malformation.

Paddington-green, Sept. 1858.

ALUMINIUM SUTURES, A CHEAP SUBSTITUTUE FOR THE SILVER.

By J. Mill Fordsham, M.D.,

HOUSE-SURGEON TO THE CUMBERLAND INFIRMARY.

Few surgeons who have tried the silver suture will, I think, deny the great advantages it possesses over the thread or silk in common use, especially where union by the first intention is required. The only drawback to its general use appears to be its great cost. As a cheap substitute for this, I would recommend aluminium, the new metal recently discovered in Paris, possessing the same qualities for sutures as silver—viz., pliability, not causing any irritation, or becoming discoloured; and having this advantage, it being half the price. In the cases in which I have tried it, I applied the silver and aluminium alternately, and allowed them to remain in the wound nine days; when examined at the end of that time, no perceptible difference could be detected in them.

September, 1856.

ON THE APPLICATION OF COMPOUND TINCTURE OF IODINE AS A REMEDIAL AGENT IN CASES OF TRICHIASIS, DISTICHIASIS AND ENTROPIUM.

By Alexander Carr, Esq., M.R.C.S.,

FORMERLY HOUSE-SURGEON TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, AND TO THE WESTMINSTER HOSPITAL.

The imperfect success attendent upon the operations usually performed for the relief of these affections, or in truth the complete absence of permanent benefit, has often been a source of regret to myself, and doubtless to many others. In the majority of cases in which operative measures have been resorted to, either by the removal in various ways of a portion of the integument, or by the more delicate operation of Professor Jäger, performed by dissecting out the bulbs of the offending cilia, the patient is reduced, after the lapse of a few months, to his former condition, and is again obliged to resort to the removal of the lashes as the only method of obtaining relief. I was accidentally led to the use of the remedy which I wish now to suggest to the profession, in the hope that, after giving it a trial, they may find the result as satisfactory as I have done.

John B——, aged twenty-three, living at Brixton, and working in a market-garden, was sent to me by some friends on March 20th, 1856. He had from birth been affected with ptosis of the right eyelid, apparently depending upon an atrophic condition of the levator muscle. On the lid being raised with the finger, it remained so for some minutes. The vision was not impaired, neither was there any discordance between the two eyes. As the unsightly appearance was a constant annoyance to him, and also hindered him from getting employment, he was desirous of having some operation performed; but having seen no benefit result from the excision of a portion of the skin in similar cases, I objected to do so, and decided on trying the effect of nitric acid, and desired him to come to me next morning to have it applied; but in the meantime I forgot all about it, and when he was shown in I had no acid at hand. I had to keep an appointment, and could not spare time to send for any; however, not liking that he should consider his journey a fruitless one, I applied some compound tincture of iodine which I had on my table, simply as a placebo. I told him to come again the following day, and took care to provide myself with the acid. However, on seeing him, he greeted me with "My eye is better, Sir;" and I found the lid really had contracted in some slight degree. Instead, therefore, of applying the acid, I repeated the application, and desired him to come again next day. The improvement still continued; I therefore determined to give the tincture a trial, and painted the lid with it each alternate day. At the expiration of three weeks the lid remained contracted, and he could keep it open without difficulty. I applied it twice at intervals of a week, and then, finding the function of the lid was no longer impaired, discontinued the treatment. I saw him again in a fortnight; the discoloration of the skin had disappeared, and he retained complete control over the lid, being able to open and shut it with as much freedom as the left. A month passed before I again saw him, and he continued well. I desired him to call again in three months' time. This he did not do; and making inquires of my friends respecting him, I found that, having got drunk and lost his place, he had enlisted. The regiment I failed to discover, but the fact of his being accepted affords evidence as to the success of the case. The application did not affect the eye unfavourably, neither irritation nor redness being produced, nor did he find the pain severe.

I attribute the beneficial effect of the iodine in this case to its action on the skin, contracting the muscular fibres, to the undue laxity of which must be ascribed the evil.

Success in this instance induced me to try the same remedy in cases of trichiasis and entropium, with the view of counteracting the atonic state which accompanies, and I believe induces, the affection. I consider the inversion of the lashes merely as an effect, not the primary cause. The muscular fibre becomes relaxed; the skin sympathises; the lashes turn in and irritate the eye-ball, which becomes painful and inflamed; the cornea is rendered opaque; the sight permanently impaired; and thus the disease goes on, palliated by the extraction of the lashes, or for a time arrested by the excision of a portion of the lid.

Eliza M.——, aged thirty, residing in King-street, Soho, had suffered from in-growing of the lashes for six years. She assists her husband in his business as a tailor, and the only way in which she can keep at work is by having the lashes constantly cut. This in a measure abates the evil; but as it causes them to grow more strongly, she is never free from suffering. She came under my care in consequence of an attack of rheumatic ophthalmia, which being relieved, I advised her to have treatment for the affection of the lid. This she consented to; but wished it to be postponed until after her confinement, which was near at hand. When she got about again she came to me, and I found her worse. Greater debility had caused the lid to become inverted more completely, and her suffering was proportionately increased; and in spite of all the cutting, she was quite unable to work. I painted the tincture carefully over the surface of the eyelid, applying it first on the 12th March, 1857; it was continued daily until the 27th, and with intervals of two or three days until April 15th, at which time she ceased to attend, being perfectly relieved. I saw nothing more of her until May in this year, when she came in great fright, telling me that, two days before, she had felt her eye troublesome, and "feared it was going to be bad again." On examination, I found there were no grounds for alarm, the cause of the pain being an eyelash which had got turned in from rubbing the eye. I everted the lid and removed it; and in compliance with her entreaties, gave her a brush with the tincture. Three days afterwards she came again, quite free from annoyance; and I ascertained that during the period which had elapsed since her first attendance she had remained able to work in comfort, and had not once removed the lashes.

Mrs. B——, the wife of a gentleman residing in Westmoreland, came under my care in May, 1857. She had suffered for nine years from entropium of both eyes, affecting both the upper and lower lids, and was in continual pain, quite unable to bear the least light, sitting usually in a darkened room, and, when out of doors, wearing a thick veil and shade. Her health was much impaired, probably from want of exercise and continual suffering. Her medical attendant had urged her to undergo an operation, and advised her coming to London for that purpose; but the natural dislike to such measures, and unwillingness to leave her family, had caused it to be put off from year to year, till quite unable to bear longer the constant misery, she came up determined to submit to anything that offered hope of relief. On my first interview I was inclined to regard it indeed as a forlorn hope. The entire series of lashes were turned in upon the eyeball, which was reddened and inflamed, there was constant discharge of hot irritating tears, and on both corneæ were nebulous patches. On more particular examination, I discovered in both lids a complete secondary row of lashes, and on the right lid an additional clump of hair growing above the inner row; this acted as a scrubbing-brush, and proved the most obstinate foe I had to contend with. The skin of the lids was unusually lax, and lay in absolute folds, and even when raised with the fingers, they still overhung, so that the lashes were not removed from contact with the eyeball. The natural treatment in this case was, of course, excision of a large portion of skin; and this, I believe, would have afforded temporary relief, but I as firmly believe the relief would have been *only* temporary, for I have watched many cases in which the operation has been performed with benefit, which yet in the course of a few months have, from the skin stretching to its original extent, become as bad as ever and the patient again obliged to resort to the frequent extraction of the lashes. I deemed it, therefore, right to tell her this, expressing also my unwillingness to perform an operation the result of which I could not look forward to with confidence. She cheerfully acceded to my wishes, not the less so I think as all cutting would be dispensed with. On the 11th of May I first applied the tincture, attending also to her general health, which was completely broken down. I made the application at first on alternate days, but towards the termination of my attendance, daily. In a fortnight there was a perceptible improvement; and in a month she could bear the light without discomfort. She remained in town seven weeks, leaving sooner than was intended on account of the illness of one of her children, and before I considered her fit to do so. I have not since had the opportunity of seeing her, but have had frequent accounts of her progress. One received during this month states that the eyes continue relieved, that she can bear exposure to light, though sometimes annoyed by the tuft of hair on the right lid. The pain experienced from the application of the iodine was, in this case, singularly variable, at times being scarcely felt, at others almost unbearable. I could, however, trace a remarkable connexion with her state of health.

C. L——, aged twenty-one, living in Drury-lane, had suffered from trichiasis for eleven years, during the last five of which she has been under my own observation, constantly needing the extraction of the lashes to enable her to work at all. She usually attended once a week, and sometimes more frequently. In June last I proposed to her to try this plan, and she consented. It has been applied at intervals of two or three days. The cure is not yet complete, but she appears progressing towards recovery, and has not needed the extraction of the lashes.

I should mention that these cases are not the only ones in which the plan here advocated has been adopted with complete success; in others it has been commenced, and benefit produced, but the treatment not continued long enough for the cure to be completed. The chief objection I have found is the unsightly colour of the paint, but this is remedied by allowing a deep shade to be worn, thus concealing the eyelids.

I have the less hesitation in laying this suggestion before the profession, since it must be conceded that the old methods have practically failed, and the innovation which I advocate is, at the lowest estimate, far from dangerous, and can besides urge in its favour the plea of success.

Grosvenor-street, October, 1858.

ON A CASE OF SMALL-POX SUPERVENING ON MEASLES AND ANOTHER ON SCARLATINA.

By M. Broke Gallwey, Esq.,

SURGEON, ROYAL ARTILLERY.

"Nobody ever saw a patient with small-pox and measles out on the skin together."—*A Clinical Lecture by* Thos. King Chambers, M.D.

Between three and four years ago, a young soldier, declining rapidly in the second stage of phthisis, became the subject of measles so well developed, that it might have been selected as a model case from which to study that exanthem. The eruption had arrived at its climax, and had gained its turning point,—the thoracic symptoms, as might be expected in such a subject, being exceedingly severe,—when the patient sustained unexpectedly an attack of rigors, and, at my visit on the following morning, presented, *quoad* his entire face, the appearance as of a substratum of shot beneath the skin. Unprepared for what was about soon after to develop itself, it will easily be understood how much at a loss I felt to account for the very unusual state of things thus unexpectedly presented to my notice. Twenty-four hours later and I found I had a case of *confluent small-pox*, engrafted on a ground of rubeola, to deal with; and I may truly say that never had I met with more finished representations of either disease than were now delineated together in the same individual. The patient contended manfully against the three separate and formidable assailants that had thus pitilessly set upon him until, under the maturating process of the last, the powers of life gave way, and a fatal issue overtook him.

The case, of which I have now afforded but a brief outline, occurred at the Military Hospital at Devonport, and was seen, amongst other individuals, by the principal medical officer of the station, Mr. Dartnell. I forwarded the details of it at the time, *in extenso*, to the Director-General of the Medical Department of the Army, in the archives of whose office I doubt not they still exist.

The foregoing case made a great impression upon me at the time, and, believing it to stand alone in the history of medicine, I have frequently upbraided myself since that I had not recorded it in the periodical literature of the day. That I have not set too high a price upon its value as an individuality *unique* in the chapter of medical curiosities, I am justified, I think, in assuming, by the selection of such an anomaly or incongruity, on the part of Dr. Chambers, to represent the *lusus naturæ* of all others the least likely to present itself to the physician's notice. If "nobody ever saw a patient with small-pox and measles out on the skin together," before or since, I may consider myself fortunate in having been privileged to witness the only case on record of this remarkable association; and but for the fact that seeing, in medicine as in other sciences, is believing, I should certainly myself for one have subscribed to the dictum of this accomplished physician as a truism as little likely to be questioned as any other established fact in nature.

Within a few weeks of the coincidence I have recorded,—small-pox, I should explain, being *prevalent* at the time in the establishment,—the following not less remarkable occurrence developed itself in the same hospital in the person of a soldier of the 1st Somerset Militia:—

Private James Bale (or Ball), aged twenty, after some few days of pyrexia, accompanied at first with "a strawberry" tongue, and then with so much swelling of that organ as to demand free incisions,—severe sore-throat being an attendant symptom,—presented, in due-time, an eruption of scarlatina, which came out well, and was intense in degree. The pulse ran high, deglutition became very difficult, delirium set in early, and the general tendency of the symptoms was in a downard direction.

Between the third and fourth day after the eruption had declared itself, the following entry occurs in the medical register of the regiment, for which I am indebted to the (then) assistant-surgeon of the corps:—"Some vesicles, depressed in centre, have appeared, bearing the character of varioloid eruption; is with difficulty aroused to answer questions; the primary scarlatinal eruption is scarcely perceptible; tongue very dry and coated—almost black; fæces passed under him in bed." Evening of the same day: "Face thickly covered with *small-pox pustules*; scarlatinal eruption receded; is in very respect worse, and apparently sinking." And, the day after, "Passed a quiet night, but lies in a comatose state; varioloid eruption in its most confluent form; breathing laborious; cheeks puffed out in expiration," &c. The patient soon after expired.

Remarks.—Here, then, within the brief space of a few weeks, we met with two coincidences in the natural history of disease, so remarkable, so exceedingly rare, that I am disposed to believe that they are almost, if not quite, unique in themselves. In the one case, small-pox and measles co-existent in the same individual; in the other, small-pox and scarlatina; occurrences remarkably negativing and subversive of the dogma of the school, now respectable only, for the most part, for its antiquity, as well as for the support which it was long, erroneously, supposed to have derived from the illustrious name of John Hunter—to wit, that Nature does not more abhor a vacuum then she does the coincidence of two poisons at the same time in the same individual. In the first of the cases under consideration, we observe the system, at one and the same moment, under the dominion of *three* separate and acute specific diseases; any one of them, we should conclude, from *à priori* reasoning, opposing an inseparable barrier against the intrusion of either, not to speak of both of the other two.

In a practical point of view, we derive a useful lesson from the striking histories I have now had an opportunity of submitting to the profession; and that is, as to the importance of *isolating* the subjects of one member of the family of the exanthemata from those who may be under the influence of another of the same; no longer confiding in the conservative influence which the existence of one of those forms of blood-poison in the system may be supposed to exercise against the possible invasion of another, a consideration which it would be well to bear in mind in arranging the "contagious wards" of our military and other public institutions for the treatment of the sick, where bodies of individuals are massed together within a narrow compass.

Corfu, 1858.

REPORT OF A CASE OF ADVENTITIOUS BANDS CONSTRICTING THE INTESTINES.

By Walter Watson, M.D., Ratho.

The publication in a recent number of The Lancet of a fatal case of obstruction of the bowels, reported to the Royal Medical and Chirurgical Society, has induced me to send the following notes, which may be of pathological interest, though not in the least of therapeutical value.

J. C——, aged fifty-seven, toll-keeper, a man of regular habits, and who had always enjoyed good health, was seized with pain in the bowels on the afternoon of the 30th of October, 1856. Two hours afterwards he was preparing to have a motion of the bowels, when he was suddenly prevented, and called to attend his toll. On his way home that evening, the pain was so great that he had to lie down several times on the roadside. After reaching home, he began to vomit; he had constant desire for motion, and several simple laxatives were administered without effect. He passed urine, however, freely. The pain continuing severe, a medical man saw him at midnight, who prescribed an anodyne antispasmodic, with local soothing applications, and on the following day a jalap purge. Partial relief was thus gained within thirty hours from the seizure, and he had regular daily motion prior to that day. Mild mercurial laxatives were continued for ten days following, when he came under my observation, as assistant to Mr. Craig. He was now put upon a quassia tonic, with Epsom salts and dilute sulphuric acid. An occasional carminative purge was prescribed, and stomachic powders.

In the course of the third week of November, both his daughter and he were seized with symptoms of general fever, which in the former developed during the subsequent five weeks the characteristics of enteric typhus. (The eruption was not seen, and but seldom looked for, as the other symptoms sufficed.) A febrifuge expectorant was given him, and in a few days his tonic was renewed.

On the 29th of November, while as yet he had never been out of bed, though feeling himself slowly improving, he was seized with a severe rigor, to which succeeded pain in the bowels and constipation. The general abdominal pain was moderate, but the cæcal region was very tender and tumid. Local peritonitic inflammatory action was diagnosed, and the patient put upon calomel and opium. Enemata were used to move the bowels, without effect; then purgative doses of calomel, aloes, and croton oil, but fruitlessly. Three days of obstinate constipation had elapsed, when, after an enema containing tincture of assafœtida, he said he felt as if a girdle round his loins had been broken and loosed, and his bowels were about to act. He passed then, and for many days thereafter, what was compared to "black burnt corks." He used for some time a carminative purge, and got gradually better; but for the whole year 1857 he was a sufferer, though he never came under our care. Severe colicky pains would suddenly arise, and sickness. Relief was gained when diarrhœa set in or when he had drunk freely of tepid water and vomited; and thereafter diarrhœa was sure to follow. One curious feature in the case was the regularity of the return of suffering between Saturday night and Monday morning. It could not be accounted for by the least alteration of diet, nor did exercise taken on Sunday morning in the least avail to alter its case. Never did three weeks pass without additional intercurrent attacks of diarrhœa, rousing him five and six times by night, which his wife treated to most advantage with castor oil, laudanum, and essence of peppermint. The cæcum was always the seat of pain "like to double him up;" but the moment that "roaring" began in that region, he knew relief was at hand, and diarrhœa about to supervene. During daytime, he felt "corded" round the abdomen, and on stooping, he felt as if "his bowels fell forward in a large knot." He expressed a hope that, if he were ultimately to "die by the bowels," it might be from looseness and not from "stoppage." In December, 1857, the vomiting, colicky pain, and diarrhœa had been more troublesome and debilitating.

Early in January, 1858, he requested our attendance; but all varieties of simple and tonic astringents, with stimuli, were plied in vain, till he died on 30th January. For the last ten days of his life the copious vomiting of grass-green material, and the drenching mucous diarrhœa were truly incredible in amount, and bore no relation to the quantities of fluid swallowed. The effect of a simple laxative was perfectly well marked, proving, if need were, the permeability of the bowels throughout their entire length. He sank from pure asthenia.

On inspection, about thirty-six hours after death, the epiploon was found tied down to the inner surface of the abdominal wall, just above the inguinal fossa, to the small and large intestines in the neighbourhood and to their mesentery, and to the iliac fossa. How much was the normal epiploon wholly divested of its fat, and how much was the old fibrous lymph,—a transformation from quondam inflammatory exudation,—it was difficult to say; but there were no evidences on the surface of recent inflammatory action. In the right iliac and the right lumbar regions, coils of small intestine were tied together, peritoneal surface to peritoneal surface; and when the surfaces thus applied back to back were forcibly separated, the lymph that glued them together seemed to be suppurating; a dirty grey fluid oozed away, and exposed an ulcerating looking surface. The coats of intestine were, however, found to be quite sound at those places. The fibrous material not only tied one piece of intestine to another many inches distant, but tied intestine to its own corresponding part of mesentery in such a manner as to give the appearance of diminished calibre and stricture. On passing the forefinger along, it was caught at those points. But on tearing these fibrous bands, and releasing the intestine from its abnormal attachment to the mesentery or other part of the intestine, the canal regained nearly its normal size, and on slitting it open no organic change of thickening or ulceration was visible. The descending colon seemed to end in a cul-de-sac before reaching its sigmoid flexure; but on tracing it, it mounted up to the level of the upper lumbar vertebræ, and then descended rather on the right side of the middle line to form the rectum.

I have taken no note of the condition of the ileo-cæcal valve, and would not trust to memory regarding it. But during the first illness his was one case of three where I have felt satisfied of being able to pass something, gaseous or fluid, from the large to the small intestine at pleasure.

October, 1858.

ON THE MEDICAL TREATMENT AND DIAGNOSIS OF STONE IN THE BLADDER.

By Arthur Hill Hassall, M.D., F.L.S.,
PHYSICAN TO THE ROYAL FREE HOSPITAL.

It has long appeared to me that stone in the bladder is one of the most artificial and unnatural affections to which the human subject is liable; and that the very circumstance of its occurrence affords a convincing proof of the incompleteness of the present state of medical science.

That this view is correct will become apparent as we consider the circumstances under which stone is formed.

First, the very words, stone in the bladder, sound unnatural—a stony substance, usually rolling about free in the cavity of a viscus having a communication with the exterior of the body.

Again, the formation of stone in the bladder is not a sudden occurrence—is not the work of a few hours, days, or weeks, but occupies ordinarily months and even years.

Neither is a calculus formed in the bladder without there being a very evident manifestation of the risk and probability of such a catastrophe.

There is invariably a persistent condition of the urine going on for months or years obvious to the unaided sight, and which ought to attract the attention of both patient and physician.

That is, for a very long period prior to the formation of a stone, there is a very sensible and obvious deposit in the urine; for it is only those substances, be it remembered, which are but sparingly soluble in the urine which ever form calculus.

Now this deposit, in the great majority of cases, although observed by the patient, is allowed to continue and to go on unchecked without his seeking for medical advice; and it is only when symptoms of stone have presented themselves that he is led to seek for aid; but then great mischief is already done, and the physician is called upon to treat not only the condition of the urine which has occasioned the stone, but has to endeavour to act by his remedies upon the stone itself. This is generally regarded as a task so difficult that the physician usually abandons it in despair, and the case is handed over to the surgeon, the stone being removed ordinarily by the extreme and heroic remedy of vivisection and forcible extraction.

In ordinary cases, then, the physician and the patient are alike ignorant of the impending calamity; or if they entertain any suspicion that the condition of the urine is one likely to tend to the formation of stone, they do not usually attach sufficient importance to it to make it the subject of active and immediate treatment. The presence of a stone is usually first determined by the surgeon. Again, when even the calculus is discovered, the physician is rarely called upon to put into operation the resources of his art; but the treatment generally pursued is strictly surgical.

Now, I contend that the physician ought to take a prominent position in the treatment of stone. The conditions of the urine leading to calculus are chemical, physiological, and pathological, for all which reasons medical treatment is required.

Further, the medical treatment pursued should not be limited to the period of the actual presence of a stone; for then, although more can be accomplished medically than is usually supposed, the best opportunity for medical treatment has passed. In fact, the treatment should be anticipative and preventive, and not merely pallative or curative.

That is, every person whose urine contains an habitual and persistent deposit should seek medical advice, with a view to the correction of that non-natural condition of urine which predisposes to the formation of calculus.

The particular nature of the treatment demanded is determined, of course, by the nature and composition of the deposit, and need not here be described; that for persistent deposits of uric acid, the urates and cystine, has already been fully detailed in my Lectures, published in The Lancet for the first half of the current year. We would in this place limit the observations we have to make to some few general particulars relating to the treatment of stone itself when actually formed, and first we would treat of solvent and especially alkaline remedies.

These remedies, as ordinarily employed, are not exhibited to anything like the extent to which they ought to be given. As usually prescribed, they are administered in doses of from ten, twenty, to at the most thirty grains two or three times a day.

This fact has been forced particularly upon my attention by the analysis of a quack remedy, called "*constitution water*," and which has acquired some celebrity in the treatment of some forms of stone. It consists of impure carbonate of potash, and the dose is the eighth part of a bottle, about the size of a wine bottle, four doses to be taken daily, equal to about 184 grains, or upwards of three drachms of carbonate of potash, a quantity which in some cases may be greatly exceeded with advantage.

Now, the doses of the other alkalies, alkaline carbonates, citrates, acetates, and tartrates, and indeed of nearly all the solvent remedies employed in the treatment of stone, may be increased in like proportion, and with similar advantage.

Another very important deficiency in the present mode of treating stone is, that the remedies resorted to, being usually only administered by the mouth, are conveyed to the stone in the bladder by the circuitous route of the circulation: in the blood, of course these remedies become much diluted, so that they reach the bladder in a greatly weakened form. Again, administered freely, alkaline remedies are apt to disorder the general health, modifying as they do so materially the vital and physical properties of the blood, as well as of the various fluids secreted from it.

Now these disadvantages may be obviated by employing the solvent remedies used in the form of *injection*; these should not only be strong and frequently repeated, but they should be retained in the bladder as long as possible, or should be injected in a continuous stream.

I am of course aware that injections have been tried occasionally in the treatment of stone, with more or less success; but they are not resorted to nearly so frequently as they ought to be, nor have they been employed in the manner most conducive to success.

I would not be understood as recommending the use of vesical injections to the exclusion of constitutional treatment; this of course should be persevered in as well.

Again, in some cases medical may be combined with surgical treatment; that is, the stone having been reduced to fragments by the lithotrite, the solution of the fragments should be attempted by the employment of suitable remedies, both through the medium of the constitution and locally by injection.

The conditions of the urine tending to the production of stone which call for treatment are those in which that fluid contains persistent deposits of uric acid, urates, oxalate of lime, cystine, and the earthy phosphates. The calculi ordinarily met with are composed entirely or in part of one or other of these compounds; those composed of uric oxide, silicic acid, and carbonate of lime, are of such rare occurrence that it is scarcely necessary to take them into consideration at all.

The following figures show the relative frequency of the occurrence of the calculi most commonly met with:—

Of 1000 calculi, the composition of which has been ascertained, 372 consisted of *uric acid*, alone, or mixed with small quantities of the urates and oxalate of phosphate of lime; 253, of the *earthy phosphates*, chiefly fusible calculi; 233, of varying layers of *uric acid*, *oxalate of lime*, and *earthy phosphates*; 142 of *oxalate of lime*.

The urinary deposits and calculi most readily acted upon by solvent remedies are, the several earthy phosphates and cystine; and therefore it is in these cases especially that the greatest amount of success is to be anticipated from the treatment here recommended.

I have now a few remarks to make on the subject of the *diagnosis* of calculi.

In general but few attempts are made by the surgeon to determine, either during the existence of a calculus or prior to an operation, the chemical composition of the calculus, and yet the microscope affords a ready and satisfactory means by which this object may generally be accomplished. Thus the composition of the stone may frequently be determined with considerable accuracy by ascertaining by means of the microscope the ordinary deposit or deposits occurring in several consecutive samples of the same urine. The determination of the composition of the calculus is not, indeed, often a matter of much importance to the surgeon who is about to remove the stone by operation; but to the physician proposing to treat the case medically it is a point of the utmost moment, because it is only upon this knowledge that the proper and exact line of treatment to be pursued can be based. There is yet another way in which the composition of calculi may be determined—namely, by a chemical examination of the fragments usually passed after the operation of crushing by the lithotrite.

Berzelius, in his "Handbook," makes these remarks respecting the solution of vesical calculi —"The attempts which have been made to dissolve concretions in the bladder have not succeeded as we might have expected. However, I am perfectly convinced that they have not been often enough reported to enable us to find out and remedy those obstacles which we are unable to foresee, and which frequently increase the difficulties of their application."

An article on the same subject in the *British and Foreign Quarterly Review* contains these words:—"So much has already been done as to hold out every inducement to perseverance, and perseverance must of necessity be crowned with success in a certain proportion of cases."

Wimpole-street, Cavendish-square, Aug. 1858.

OBSCENITY AND QUACKERY.

A DISGUSTING pamphlet lies before us, which, we are assured, is being systematically sent into private families, addressed to married men, and circulated amongst naval and military officers, and the camp at Aldershott, &c. It purposes to treat of "various diseases of the urinary and procreative organs on an entirely novel and most successful system," and it is stated to be written by a fellow of the name of WATSON, calling himself "Physician to the Bedford Dispensary." Of course, this delectable composition is but a single specimen of many like dishes which are being constantly served up as *réchauffés* for the gullible and queerly constituted appetite of the British public—a public which, with the unctuousness of the utmost self-complacency, will go through any amount of toil, and submit to any expenditure, for the "conversion of the heathen," but will pay no more than three halfpence for making a mantle, nor anything at all for the sake of putting a stop to the loathsome practices and knavery of this Watsonian and "Silent Friend" system of quackery. On the contrary, it receives it openhanded, stamps it with a legal power by converting its nostrums into "patent medicines," and pours thousands and thousands annually into a slough, which should have gone to the proper earnings of the medical practitioner. Nay, the triumph does not end here; for quackery can, without much exertion on its own part, actually find a member of the British Legislature rising in the Senate to sing pæans over Coffinism and other rampant follies! Verily, we are a strange set, from the country bumpkin,—who, on his first visit to the "great metropolis," gives his all, his twenty sovereigns, to the gentleman to hold whilst he plays a friendly game at skittles with the stranger, and receives back fifty farthings,—to the unfortunate hypochondriac, who being persuaded he has got—heaven knows what!—consults this precious Dr. WATSON, *et hoc genus omne*, and perhaps is ruined for life in mind and body. We say we are a strange set—i. e., the general public is; for no amount of being "done for" and "taken in" seems to be capable of guarding it against blackguardism and quackery. One would think from the way in which the vile productions we have alluded to swarm in this country, that we possessed the most congenial climate for their propagation. This we can scarcely credit; but certainly we "Britishers, who always go upon the high moral ticket," do permit strange practices to exist with the utmost impunity; and when such practices are *profitable* to their performers, of course there is no lack of them, however degrading and disgusting such things may be. Here is one—viz., the quack WATSON, who intimates that Post-office orders may be made payable, "to his Private Secretary, Mr. WILLIAM HILL," and who, of course, begins and ends his illustrative cases, or extracts from his patients' letters, with—"Enclosed you will receive a post-office order for £1 1*s*., your fee," "enclosed is your usual fee," as gentle reminders to all prospective miserable dupes of what is both the alpha and omega of the whole business—Pay, pay, pay! "Put money in thy purse" is the motto of the whole gang of these extortionate and filthy fellows, whose flourishing existence and mendacious audacity is a disgrace to our social economy and moral pretensions.

MEDICAL EDUCATION.

HOWEVER great may be the improvements introduced by the Hall and College into the new educational curriculum, and however desirous the examining bodies and teachers may be to carry them into effect, it may be depended upon that they can be but very imperfectly attained unless some other changes are also effected. What these changes are we shall proceed to point out.

In the first place, it is requisite to put a stop to the practice of students taking situations as assistants, dispensers, &c., whilst attending hospital practice and lectures. Ample experience justifies us in affirming that the custom alluded to is a constant cause of great neglect being paid to those educational duties which the student is ostensibly fulfilling. A man cannot serve two masters. If he has to make up prescriptions and to attend to the general requisitions of a general practitioner's surgery, he cannot regularly follow his lectures and prosecute his clinical studies at the hospital. We know it may be replied, that it is always stipulated for in the engagement that time shall be granted to follow these pursuits. Pooh! What will two hours a day do in this respect? and how much more is usually allowed? Why, in a great many instances, not even these are regularly obtainable. Besides, young men who have already been two or three years at pharmacy in the country will, when they come up to London, "offer their services" to some medical practitioner, who lives, perhaps, two miles, or even more, from the nearest hospital and school. Such gentlemen "run up town" perhaps *twice a week!* Nay, we have actually known a student, when his certificates were threatened, adduce as a sufficient reason for neglecting his studies the fact that he was "assisting a gentleman." On inquiry into what this assistance consisted of, we found it was *dispensing medicines*. Now, let us ask, how can a student fairly follow up the present curriculum of theoretic study and practical investigation necessitated by the examining bodies, upon two hours a day, irregularly snatched out of the dispensing duties, &c., of a general practice, perhaps a long distance from the hospital? The thing is impossible, and no sort of excuse that it is justifiable, can be offered for the permission of the continuance of the custom. In the majority of these cases the student attends perhaps two weeks' lectures at the commencement and two at the end of the session, and runs in to attend the surgical visit round the wards twice a week at the utmost, for the space, perhaps, of one hour, but certainly not more. This is all he has time to accomplish; so, neglecting his lectures and clinical studies, he places his hopes in the "grinder," the rest being only "leather and prunella." We say again, let the examining bodies discountenance, if they cannot altogether stop, the reprehensible and mistaken practice we have condemned.

In the second place, we would observe, that it is of little use saying that students must perform certain duties if they are left almost entirely to their own choice whether they will attend or not. That such is at present the fact no teacher can dispute. A *few* gentlemen at each hospital, all regular students, attend the lectures, follow perseveringly the practice, and wind-up with dressers-ships, and being clinical clerks. The lecturers and officers know them well, and value them accordingly. They talk to them, explain and discuss professional subjects with them, and give them private certificates and testimonials when they leave their studies. Such few gentlemen are the men who do their teachers and the hospital credit. But, unfortunately, their number is, indeed, few. Then, what of the others? Why, as they are not obliged to attend to their duties, they soon get tired of them. They hang about the place, drop into the dissecting-room, loll away an hour in the library, and wear the morning out in this desultory and objectless way. Of course, there are still others who change even their habits of idleness for avocations which, if not more idle, are at any rate more to be deplored. The truth is—there is no use in disguising it—there is no *discipline* in the London schools speaking generally. The certificates are signed, in the majority of cases, as a mere matter of conventional usage. They can scarcely be refused, indeed, unless in an instance of open and notorious neglect of all regularity. Now, this is a deplorable state of matters, but a state which should be permitted to continue no longer. How it originated, and why it has been allowed to continue, it may be difficult to say, but when we reflect that (according to a recent calculation*) the student has hitherto been imagined to attend during his curriculum about 1300 lectures, each of which is an hour long, besides dissecting, medical and surgical practice, &c., we cannot be altogether astonished that regular attendance has been viewed rather as a myth than a truth.

> "Many young men who begin their studies in earnest become perplexed and discouraged by the multiplicity of claims simultaneously made upon them, and at length lapse into indifference as to either lectures or hospital practice, provided only they can obtain the requisite certificates. They, therefore, content themselves with appearing at the lectures and at the hospitals just so often as needful to prevent them from seeming entire strangers to the lecturers, or to the physicians and surgeons of the hospitals which they attend."—Op. cit.

Now, however, that much of this over-lecturing is lessened, there will be little excuse for the continuance of this known irregularity. That the exact remedy is difficult to point out we readily admit. To oblige unwilling students to attend the class-room with benefit to themselves and comfort to others is, according to past experience, an almost impossibility. At any rate we are told by the *Westminster Review* that

> "Vain attempts are made at some schools to enforce attendance on lectures by withholding the certificates from such students as do not comply with the regulations laid down. Attendants on the lectures at St. George's Hospital are expected to attest their presence in the lecture-room, by signing their names at the *conclusion* of the lecture, whenever the lecturer may suddenly call upon them to do so. The chief result is, that each lecture is interrupted throughout by the entrance of students almost every minute of the hour, their main object being to be present at the end, when they may be called upon to give their autographs to the lecturer. The punctual and attentive listeners to the lecture are still more effectually prevented from concentrating their attention upon it by the attempt to enforce discipline which distinguishes King's College. There the porter puts a mark against the name of each pupil who enters the room before the professor begins his lecture. The presence of the idlers being thus enforced, they seat themselves on the backmost benches, and occupy the time of the lecture in playing all the games possible to inventive geniuses under such circumstances. The authority of such professors as Dr. Budd and Mr. Fergusson to maintain silence is powerless; we have often seen them compelled to stop in the middle of a sentence until the uproar subsided. The injustice of such a system to the real student is sufficiently evident."

That such a system, where it has been tried, has not answered, we ourselves know from practical experience. Nor do we think it would work better in the future. But something should be done to obviate henceforward the culpable leniency and irregularity marking the procedure both of pupil and teacher. It has long appeared to us that it would not be a plan unworthy of trial that it should be the custom of each school to send in yearly to the examining boards a private and confidential report connected with the attendance at the hospital and lectures. In this report it would be unnecessary to make mention of all those students who have attended and conducted themselves with ordinary regularity and propriety. But it should refer, in the first place, to those who have much exceeded the usual average, and, secondly, to those who have fallen below it, and have become well known to the officers and teachers as idle and careless men. In this way everyone would have to be upon his guard, as he would never be sure that his name would not be known to the examiners, when he appeared before them, as associated with "good or evil report;" and we can scarcely believe that any such relations could exist between teacher and pupil as might render such private reports unjust representations, or weapons of tyrannous abuse.

Thirdly (and in this respect we heartily agree with the Westminster Review), it is high time to consider whether some change cannot be effected as regards the acting physicians and surgeons to an hospital making their visits at the same hour, "at the very time that certificates are both expected and received from students that they have attended both." We have witnessed no less than *three* officers making their rounds at the same moment in the same range of wards! The most attentive and industrious student it is certain cannot be ubiquitous, with whatever conventional falsity his schedule may affirm that he can.

Lastly, the College and Hall must look a little more sharply and closely into the *régime* of some of the hospitals. "No provincial hospital," says the Council, "will be recognised by this College, which contains less than 100 patients, and no metropolitan hospital which contains less than 150." "No hospital," writes the Hall, "will be recognised by the Court unless it contains at *least* 100 beds," and that "it be under the care of two or more physicians, and an apothecary legally qualified." "Certificates," the College assures us, "will not be recognised on more than one branch of science from one and the same lecturer." "No lecturer," we are informed at Blackfriars, "will be recognised by the Court who teaches on more than *two* branches of medical science." Now we may assure both sources of power and of law-making, that to issue regulations and not to see that they are carried out is little short of a *reductio ad absurdum.*

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* See an article upon "Medical Education" in the July number of the *Westminster Review*—an article, by the way, expressing many opinions in which we cannot coincide.

THE MEDICAL PRACTITIONERS ACT.

On Monday, the 2nd of August, the Royal assent was given by commission to the Medical Practitioners Bill, so that this measure, which comes into operation on the 1st of October next, is now part and parcel of the law of the land. We do not hesitate to declare our conviction that, next to the India Act, this will prove to be the most important Statute of the session just closed. Since the subject was first mooted in the pages of The Lancet, Medical Reform has been one of the standing questions of successive Parliaments. It has been the subject of parliamentary committees, of many great medical associations, and of numerous Bills, all of which proved abortive, until the Hon. Mr. Cowper took up the question, and at last received the support of the new Home Secretary, the Hon. Mr. Walpole, and the leading members of Lord Derby's administration. Several distinguished ministers of state have brought forward Medical Reform Bills, but have been glad to escape from a subject difficult to understand; others, introduced by private members, have been lost through parliamentary apathy, or by the conflicting interests of the various professional bodies interested in the matter. Mr. Cowper, coming to the subject after repeated failures in other hands, has given it such patient attention, and displayed so much ability in managing the Bill, and in conciliating the parties supporting and opposing it, as to obtain, not a perfect measure, but probably the best that it would have been possible to procure in the present temper of Parliament and the condition of the medical profession. The Home Secretary has certainly put the medical body under a debt of gratitude to Lord Derby's administration.

The leading points of the Act itself may be very briefly stated. First in importance is the provision it makes for uniformity of education, and uniformity of examination for medical and surgical licences, memberships, and degrees throughout the United Kingdom. None of the medical corporations are destroyed, though some of them are seriously affected, by the clauses of the Act. The measure further provides for reciprocity of practice, and gives to every man who has qualified in any part of the kingdom, the right of practice in every other. It enjoins a system of registration of the whole profession of England, Ireland, and Scotland, not in classes, but according to an alphabetical arrangement; and is, in this respect, an approximation to the one-faculty system. It also enacts that no man shall practise medicine or surgery, except under heavy penalties, unless his name shall be contained in the Medical Register, which is to be corrected on the 1st of January in every year. As regards the important subject of registration, the Act is a close approximation to the Bill introduced by Mr. Wakley in 1847.

These important powers of the Act are to be carried into execution by the General Medical Council, a body of twenty-four persons. Of these, seventeen are to be chosen by the various medical corporate bodies; six, not necessarily medical, are to be nominated by the Queen, with the advice of her Majesty's Privy Council; and the President is to be elected by the General Council. Of the seventeen chosen by the corporations, seven are for England, five for Scotland, and five for Ireland. The six members nominated by the Queen would, some or all of them, be lay persons, and the President would probably be the Secretary of State for the Home Department, or the President of the Council of Education. The members of the Council chosen and nominated for the three divisions of the United Kingdom are to act as Branch Councils for the government of the medical profession in England, Ireland, and Scotland respectively, but the power of appeal to the Queen in Council, which is its highest function, can only be made by the General Council as a body. To the General Council will also belong the duties of preparing, by their officers, the Annual Register, and of providing one Pharmacopœia for the United Kingdom. The General Council will have the power, through representations made to Her Majesty's Privy Council, of arranging the course of study and examination, and of suspending the functions of any of the examining bodies who may come short of the requirements of the General Council, as regards education and examination. Any member of the General Council, or any person deputed by the Council or its branches, may be present at any examinations, with a view to their efficiency.

The seventeen medical members are to be "chosen" by the various corporations. In what manner the choice is to be exercised is not set forth in the Act. This we consider to be a defect, inasmuch as from their past history, it may be assumed that the medical corporations will make the selection of members of the Council as close and irresponsible as possible. It will be for the profession to make itself felt on this point, and if the corporations are wise, they will arrange the choice on a wide basis. There is one guarantee that good men will be sent to the Council, in the fact, that as nineteen different corporations are to be represented in the General Council, those which select inefficient members will be practically disfranchised. In the collision of the various bodies in the Council, we have the assurance that education and examination will be kept up for a fair standard, and that any one body lagging behind the rest, will be deprived of its examining powers. From this clause of the Act, and the clause which allows several Colleges and bodies to unite for purposes of examination, it may be expected that after a time the excessive number of examining bodies will be diminished.

But while the general supervision of the profession is thus left to the supreme Council and its branches, the particular management of the different classes of the profession by the medical corporations appears to be contemplated. By the terms of the Act, Universities, Colleges, and Halls are all grouped together as examining bodies. The Colleges of Physicians of London, Edinburgh, and Dublin can give the licence to practise, and the Universities of England and Ireland can all give degrees. The degrees and the licences are equally recognised by the General Council, and the owners of them placed upon the register as legally-qualified medical practitioners. Thus the licence of the Colleges is in no wise superior to an ordinary degree, and the owners of a degree need not, according to the terms of the Act, apply to any of the Colleges before assuming the right to practise as a physician. In this respect, the Colleges of Physic have lost an assumed and legal, but unasserted, right; it is, however, shadowed forth in the Act that new charters are to be granted, constituting Colleges of Physicians of England, Scotland, and Ireland, in lieu of those of London and Edinburgh, and the King's and Queen's College of Dublin. It is also proposed to unite the College of Surgeons of Edinburgh and the Faculty of Glasgow as the College of Surgeons of Scotland. In this way there will be Royal Colleges of Physicians and Surgeons in each of the three kingdoms. It must be confessed that, as matters now stand, the London College of Physicians has lost more than any other body by the recent legislation. According to ancient charters, we believe no other personage in the realm had greater powers than the President of the College; but President and College are suddenly shorn of nearly all power and privilege by the new Act. It remains to be seen what provisions can be made under a new charter for upholding these venerable institutions; but it behoves the parties interested to be prompt in their movements, or the profession will settle down under the new Act, and the Colleges of Physicians will find it difficult to obtain their legitimate place and influence in the profession.

From the time the charter was granted to the College of Physicians of London by HENRY VIII. to the present day, all actual medical legislation has been conceived in a purely corporate spirit. We have gone on repeating, in effect, that scene immortalised by HOLBEIN, in which the row of kneeling, scull-capped barber-chirurgeons receive the ancient privileges of the pole and ribbon from the hands of the bluff King. The powers of single bodies have been enlarged or their abuses corrected, fresh charters have been granted, and new universities, colleges, and halls have been created; but everything has been done solely with reference to the interests of particular institutions. It has always been bit by bit legislation. Heretofore, no measure attempting, even in the slightest manner, to embrace the entire faculty of England, Ireland, or Scotland, much less the whole medical profession of the United Kingdom, has been sanctioned by the Legislature. A new era, then, will be entered upon under the present measure; and it is, we conceive, no light matter that a great, influential, and learned profession has passed at one step from the close and restricted arrangements of the sixteenth century, to the freer political atmosphere of the nineteenth. Hitherto, the allegiance of medical men could only be given to the particular hospital, college, or body to which each has belonged. In future, it will be claimed by the profession at large, as represented in the Supreme Council. We have never before had a collective existence. Medicine has been without any public life. For the first time in its history, the profession will be collected into one organization, and grafted into the State, where we doubt not it will grow into its proper social and political importance. Everyone could point to the Archbishop of CANTERBURY and the LORD CHANCELLOR as the heads of the Law and the Church, and the second and third persons in the monarchy after the Royal family; but no one could say who was the head of the medical profession. We shall now have an undoubted head in the person of the PRESIDENT of the Medical Council, who will wield a more real power than has ever yet been exercised in the medical body, and who will be in immediate relation with the Privy Council and the SOVEREIGN. We may hope that at no distant period the administration of the medical part of the Poor Law, the registration of Births and Deaths, the Commission of Lunacy, Vaccination, and Sanitary Measures, may, in the natural development of the profession, be collected together under the control of a MINISTER OF HEALTH. A Ministry of Justice has already been sanctioned by Parliament, and there can be no doubt that a Ministry of Health will give a just weight to our profession and prove a boon to the community.

Owing to the segregation of the various medical bodies, and to the obsolete powers possessed by many of them, the limited legal powers which they have possessed for the improvement of the medical profession, and the punishment of pretenders, have always been practically in abeyance. We have had no law but LYNCH law. Medicine has been out of joint with the age. We have been a set of Arabs living in a civilized community. Any knave, without the slightest qualification, might call himself physician, surgeon, or apothecary, and practise with impunity upon the lives of HER MAJESTY's subjects. The judges have ruled, under what we may now call the old laws, that the most wretched pretender was, in case of accident or death from the administration of improper medicines, on precisely the same footing as the most highly-qualified man. Hence it is that quackery and illegal practice have flourished amongst us to a degree which is probably unparalleled in any civilized country in the world. But under the simple powers of the New Act, unqualified practice ought to become as rare in medicine as it has long been in the law. In this respect an immense advantage has been gained. A medical profession, having a collective vitality, will soon reduce quacks and pretenders within its ranks to their proper proportions.

Even in the chaotic state of the profession, medical science has advanced at least on a par with other branches of knowledge. Discovery belongs to the individual mind, rather than to organization; but in a monarchy like that under which we live, and in a highly artificial condition of society, it was impossible that without some comprehensive polity the profession could thrive as a body or obtain its due weight in the State. Though we expect the greatest results from the Medical Act in a political point of view, it is only reasonable to anticipate that the medical mind, under new and advantageous conditions, and with new strength poured into it, will apply itself with increased power, to scientific questions. We have long looked for some Newtonian laws in relation to health and disease, and may hope that the new *régime* will not be without fruit even in this respect. Certainly, Medicine, in this country, has, both as regards Science and Polity, entered upon a new era. After a long and protracted struggle, we have obtained in this country, by legal and constitutional means, that escape of the medical profession from the bondage of feudalism and the middle ages, which in France was accomplished suddenly by revolution at the close of the last century. We shall no longer envy the superior organization of our neighbours. Care will of course be required, especially on the part of the medical press, in watching the administration of the new law, and the provisions of the charters which are to follow in its wake. But with our free institutions there is scarcely a limit to the influence which the profession may come to exert in the state now that it has acquired a collective and political existence. Every year the number of Acts of Parliament having reference to questions of public health increases, and it must soon become a positive necessity that medical men should enter the Legislature. The inducements to enter the profession will increase, and its honours in the State cannot long remain limited to their present scanty proportions.

Of the part THE LANCET has taken in producing the great result that is now before the public, we shall not speak at this moment, contenting ourselves by merely remarking that the history of this journal is also the history of MEDICAL REFORM.

QUACKERY.

IN quackery it is difficult to say whether the knavery of the charlatan or the silliness of the dupe is in the state of highest perfection. It little matters what the cajolery be, there are fools large enough and small enough to adapt themselves to it. A month or two's stay at a fashionable "hydropathic establishment," with the sequela of a little account of a cool hundred, and the box of pills, price thirteen-pence halfpenny, for curing the "swollen legs from varicose veins, or from whatever cause," of an old washerwoman, represent the poles of a battery which transmit their current of noxiousness through almost every grade of the social community. If there be one privilege which persons of a certain class seem to be more tenacious of than another, it is that of being allowed to be "taken in and done for." It is a patrimony common alike to the noble and the clown, and one they both seem determined shall continue to remain with them. But we were scarcely prepared for the revelation that *Yorkshire*, that county of "'cute chaps," had a climate wonderfully congenial to the growth of quackery. Yet such is the case it seems, if report speaks true,* and we must henceforth relinquish the conventional opinion, that Yorkshiremen are not easily taken in, and accept the truth, that if they can *bite* they can also *swallow*. One of the greatest quacks that ever preyed upon that portion of the public that has more *pains* than *brains*, was MORISON, the so-called "hygist." Although a fact not generally known, he was, at the beginning of his career, a *street* charlatan, and is said to have been the inventor of that style of quack oratory, or *patter*, which is employed at the present day by his illustrious successors. Now this fellow, MORISON, we are told by FELIX FOLIO, "as an itinerant, was most successful in Yorkshire," and the inhabitants of this county, however wide awake in their own opinion, "were certainly not too far north for old MORISON." REBECCA and her children—we mean those of the principality of course—are, it seems, also easily attracted by the slightest manifestation of the genius of humbuggery—witness the following confession of a daring scoundrel:

> "Talk about 'stonishing the people! I'll tell you what I did once in Wales. I had been drinking, and got regularly hard up. I wanted something fresh to take the people's attention, so I got a *black leather shoe lace*, suspended it in water in one of them there transparent bottles, and labelled it—
>
> "'This Black Worm was passed from a Man's Stomach yesterday, aged 45 years.'
>
> "Crickey! didn't it take! A black 'un had never been heard tell on before. I believe half the poor people in that part of the country came to see it; not one on 'em ever knowed but what it was a worm. I took good care to have the bottle sealed up, and I know I never laid out a ha'penny better in my life; it gave me a good start up again."

But the Londoner should not see the beam in his brother's eye only, but should remember how large is the one in his own. Galvanic rings, electro-galvanic chains and batteries, mesmeric passes, pepsine powders, Old Dr. JACOB TOWNSEND's Sarsaparilla, and Young Dr. JACOB TOWNSEND's still more superior article, together with a legion of other absurdities, have been philanthropically placed at the disposal of the inhabitants of the Great Metropolis by their inventors, and have been each, for the time, accepted as all that could be desired. Were the result of all this delusion only the loss of money to the dupe, we should hold our tongues, thinking the punishment well-merited. But the proceeds of quackery have often other than financial relations. Men are made to suffer in mind and body as well as in purse, and to suffer in body even to a fatal extent. If a Manchester cotton-spinner were to "wind *eight hundred* yards on a thick spool, and label it *one thousand*," and find a purchaser for his cheap "dodge," he would certainly rob his customer and degrade himself. But there is the end of it, or, the cotton out, the sewer must only buy more. But when a wonderful "herb-powder" is sold to cure the "asthma," or a notorious quack is consulted, who administers some teaspoonfuls of pulverised herbs, the unfortunate victim is occasionally cut short in his career—in other words *he is slaughtered*. Yet if so, who cares about it? What punishment does the charlatan receive for his quacking practices? What care is taken to prevent the recurrence of such mischief for the future? Our readers know what answers must be made to such questions. But change the scene; let some over-worked and fatigued practitioner be hurried, almost against his will, to a distant disaster, and let rumour arise that he mistook for a few days a dislocation for a fracture, or allowed a labour to continue unassisted beyond the time that is generally deemed proper for the parturient woman, and what an outcry is made about it! The whole neighbourhood is in arms; the judge lectures, the jury express their lamentations, heavy damages are awarded, and the, perhaps, once-erroneously-judging practitioner is totally ruined. Why? because, as it is asserted, her Majesty's subjects must be protected from erroneous medical treatment; the medical practitioner undertook to do that which he did not properly accomplish, and hence must be punished accordingly. But the quack—what of him? Oh, nothing: you may swallow his lobelia powder of gamboge pills, be killed by his "universal medicine" or the vegetable panacea, have your leg tortured by his bone-setting into a fatal gangrene, and we shall permit you thus to be dealt with to your heart's—and the undertaker's—concontent. It is your own affair—we cannot say the enlightened jury interfere between the ministering angel and the afflicted martyr!

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* The Hawkers and Street-dealers of Manchester and the North of England Manufacturing Districts generally. By Felix Folio. Manchester: Heywood. London: Grattan. 1858.

A correspondent of the *Athenæum* (Aug. 14th) has denied the truth of the above, maintaining that the quack MORISON, was a retired "officer in the army, lived in No. 17 Silver street, Aberdeen, a house belonging to Mr. REID, of SOUTER and REID's, druggists. He obtained the use of their pill-machine, with which he made in their back shop, as many pills as filled two large casks. The ingredients of these pills, however he may have modified them afterwards, were chiefly oatmeal and bitter aloes. With these two great 'meal bowies' filled with pills, he started for *London*, &c." Can the correspondent say, "I'ze Yorkshire too?"

A Mirror
OF
THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Prooemium.

ST. BARTHOLOMEW'S HOSPITAL.

Epithelial Carcinoma of the Tongue Removed by the Ecraseur; Recovery.

(Under the care of Mr. PAGET.)

THE tongue, like other organs of the body, is subject to various diseases, which demand medical and surgical interference. Amongst these may be enumerated inflammation, true muscular hypertrophy, tumours of various kinds, and malignant diseases, especially cancer. The majority of operations upon the tongue are performed for the last of these, a disease by no means common, yet occasionally presenting itself for treatment in our large hospitals. Though most common in old people, as is the peculiarity of cancer, it is sometimes observed in the young, when the age is apt to mislead, unless the unmistakable nature of the affection renders the diagnosis pretty clear. There is good reason to believe that, in whatever manner it may appear, carcinoma of the tongue originates in the follicular structures, whence it gradually spreads to the other tissues. If left till in too advanced a condition for the removal of a portion only, then the entire excision of the organ has been practised, as was performed by Mr. Syme, of Edinburgh, on two occasions, whose cases have already appeared in this journal. In his remarks on extirpation of the whole tongue, Mr. Syme feels himself warranted in asserting, that even in the event of success, as the permanency of relief would still admit of question, he thinks no hesitation is necessary in deciding against the repetition of this proceeding.

After the expression of such an opinion from so high an authority in this matter, we think it is the duty of every surgeon to resort to early removal of the affected portions when the patients are seen in good time (as was adopted by Mr. Paget on this day week), more particularly if the tumour or cancerous growth has been increasing rapidly, and the more likely to spread over the surface, when it might assume the characters of the encephaloid variety of the disease.

Removal being determined upon, the choice of effecting this is offered by the ligature, the knife, and the écraseur. This, of course, will very much depend upon the views entertained by the surgeon himself; examples of each, however, have appeared in our "Mirror." The knife is usually set aside, because of the hæmorrhage; but we will venture the observation, from what we have seen of the écraseur used upon the tongue, that there is by no means an absence of hæmorrhage after it is withdrawn; and this can be the better understood when we remember how peculiar is the structure of the tongue, which may be said to be granular, and likely to break down during the crushing process, and therefore exposed to severe laceration. At St. Thomas's Hospital in May, 1857, Mr. Simon removed about two-thirds of the tongue from a man aged fifty, extensively affected with epithelial cancer, in the form of two ulcers, extending far backwards. The écraseur was being used; but its substance was found so soft and friable, that the chain tore its way through at once without being worked; this was attended with little bleeding. The tongue was then tied at its base and cut away in front; but very alarming hæmorrhage occurred from the slipping of the ligature, which nearly proved fatal, but eventually arrested by tying numerous vessels and applying the actual cautery. It is fair to state that this bleeding was not due to the écraseur. The man left the hospital with the wound perfectly healed three weeks afterwards, and able to eat and speak wonderfully well. One of the sublingual glands was enlarged; it did not increase immediately after the operation. The relief was looked upon as temporary, and it would be interesting to know his present condition if still alive.

The patient under Mr. Paget's care was a woman, in good health, aged about fifty-eight years, admitted on the 10th inst. She stated that her present disease began as a small pimple or lump on the right side of the tongue three months ago; it gradually enlarged, but has grown rapidly within the last fortnight, attaining the size of a walnut, and became ulcerated. It projected as a white growth from the surface of the tongue, as if covered with a sort of efflorescence, and was a well-marked example of epithelial cancer. She consented to have it removed.

On the 11th, chloroform was carefully administered by Dr. Martin, and kept up at intervals throughout the entire operation, which consisted in passing a needle and thread through the centre of the base of the tumour, and pulling the chain of the écraseur after it. This was then attached to the instrument, and adjusted around the posterior half of the growth, and then cut through after the lapse of some minutes. The chain was now applied around the anterior half, and the complete detachment was accomplished in about the same time as the posterior portion. There was some hæmorrhage, but of moderate extent, and which appeared to cease after a short time.

On examining the diseased mass, it was found completely removed. A section gave the ordinary aspect of epithelial carcinoma of the tongue. In some remarks made by Mr. Paget, he stated that the écraseur was well adapted to remove it, as it did away with the large amount of bleeding which generally takes place from the tongue when that organ is cut across.

ST. THOMAS'S HOSPITAL.

Ulceration between all the toes of both feet in a girl.

(Under the care of Mr. Mackmurdo.)

A very curious and instructive case is under treatment in this hospital. It is instructive because it shows how webbed fingers and toes may occur in adult life. A girl, twenty years of age, but looking as if seventeen, was admitted on the 6th instant, with ulcerated surfaces between all the toes of both feet, the ulcerations lining either side of the toe in contact with the opposite one. On separating them with the finger, a red and very raw surface was exposed, extending just beyond the edge of the opposed surfaces of the toes. They were tender, and felt very sore, completely disabling her from walking. About six weeks ago, these ulcerations commenced in the form of single blisters or blebs, which burst, the cuticle becoming detached, and leaving a raw surface beneath. There was no traceable cause, unless perhaps some irregularity of the menstrual function, but in other respects the girl's general health was pretty good. She was ordered small doses of aloes-and-myrrh pill, with mercury with chalk, twice a day, and the use of zinc ointment, carefully spread on strips of lint, to be placed between the toes as far as possible, so that any tendency to union of the opposed surfaces might be avoided. Under this treatment she is improving, and will eventually, it is to be hoped, get well.

Now, this affection is by no means frequently to be seen, and the diagnosis as to its real nature is somewhat conjectural. The situation of the ulceration is that of soft corns, where the cuticle is soft and spongy, but they do not appear so suddenly, nor would they occur between all the toes. The probability is, that an eruption of a phlyctenular character took place, characterized by the formation of blebs, which burst, and owing to the peculiarity of the secretion in this situation, together with the natural moistness of the skin, assumed an ulcerative character. There is more than a probability in this view, because at the margins of the ulceration, at the upper and under surfaces of the toes, is a slight appearance of whitish lamellæ, as is noticed in the eruptions of pemphigus. In the pemphigus infantilis, the soles of the feet are sometimes covered with bullæ. In this girl, the blebs were single, and isolated to either side, and are thus diagnosed from herpes from the absence of any group of vesicles.

This affection must not be confounded with simple eczema, which is found frequently in other places, as on the arm and forearm, also between the fingers, but rarely between the toes. An ulceration is sometimes witnessed between the toes as the result of syphilis, as we have heard Mr. Curling state, but then the cause is clear and the treatment obvious.

If ulceration is neglected in this situation, it is most liable to end in complete union of the opposed surfaces, and the formation of webbed toes. In adults, when this deformity occurs, its origin can be distinctly traced sometimes to intra-digital ulceration.

Since the foregoing was written, we have met with the case of a little girl, five years of age, in the Charing-cross Hospital, under the care of Mr. Barwell, with ulceration between all the toes, but depending upon ecthyma, the general health being bad. Tonics were principally relied upon to effect a cure, and the ulcerations healed.

LONDON HOSPITAL.

Cystic Disease of the Breast, with Hypertrophy of the Proper Glandular Tissue; Amputation; Recovery.

(Under the care of Mr. Curling.)

It is a matter of essential importance for the surgeon to be enabled to diagnose a benign from a malignant tumour of the breast; and it is not the less so for the patient also, if he can predict with tolerable certainity whether the disease will return or not. A growth of the breast which requires careful study on account of its occasional resemblance to cancer, is the chronic mammary tumour, or mammary glandular tumour, as it is called, or the sero-cystic disease of Sir B. Brodie, all of which terms are equally expressive as to its chaacter. Its essential element is hypertrophy of the glandular structure itself, with an equal enlargement of the fibrous tissue, which envelopes and intersects the gland, in the meshes of which cysts filled with fluid, varying in size, are liable to form, although they are not invariably present. Sometimes cysts occur in the breast, developed within the gland ducts themselves, situated in various parts of the breast; these, again, are different from those met with between the lobules associated with hypertrophy of the gland tissue. The distinction is important in the anatomy of the breast, and admits of a comparison with the vesicular and interlobular form of emphysema of the lungs, in their disposition.

Although we have recorded cases from time to time in our "Mirror," we will refer to another example of true cystic disease which we saw submitted to operation on the 9th inst. The left breast of an otherwise healthy woman was first affected with some induration and enlargement five months ago; this slowly increased, but there was nothing unusual about the case, or that demanded active interference. The shape of the breast was natural, there was no retraction of the nipple, nor any appearance indicating malignancy. Latterly, however, she complained of a little pain, and she was admitted into hospital and submitted to constitutional treatment, but without any positive benefit. She is married, and the mother of one child, whom she never suckled, and her menstrual functions are regular. It was determined to remove the breast, which, on examination, presented some slight induration on its outer side; it, however, looked more like the organ of a much younger woman, from its rotundity and plumpness. She was placed under the influence of chloroform, and Mr. Curling then proceeded to perform amputation, taking away the outer half of it, dissecting off the nipple and skin, which were left, and carefully removing several small cysts, situated towards its outer surface. There was but little hemorrhage, and the edges of the wound were brought together by stitches and adhesive plaster. A section of the mass showed the true glandular structure, natural in appearance, but hypertrophied and somewhat hardened, and surrounding it were several cysts varying in size, the largest as big as a walnut, filled with a serous-looking fluid. The nature of the disease was unmistakable, and, under the circumstances, the operator was satisfied at leaving the other portion of the gland untouched, for it can be pronounced with tolerable certainty that not only may a good recovery be expected, but in all probability the patient will be free from any return. As a rule, these cases are generally met with at an earlier age than in this patient, but any one seeing her breasts would have pronounced them unusually well developed and smooth, but this may be in some measure due to the fact that she had never suckled with them, and there was, therefore, no evidence of shrivelling up as is seen in old women. The union of the wound is going on most favourably, and her condition is on the whole very satisfactory, as she is approaching to recovery from the operation.

About two years ago a well-marked case of this form of disease, with very great hypertrophy of the gland, was received into this hospital, in which the breast was removed by Mr. Nathaniel Ward. We thought at the time that it was one of the largest we had seen thus affected; the patient (a young woman) made a good recovery, and so far as could be learned had no return of it. Mr. Adams stated that he had removed several breasts like that of the first patient, and the result of his experience was that the disease did not return.

The difference between cancer and cystic disease was well shown by the recurrence of the disease in the axilla of an elderly woman whose left breast was amputated by Mr. Adams six weeks before. The wound had perfectly healed; it was, however, followed by enlargement of one of the axillary glands to the size of a marble, which was removed, without giving the patient chloroform, on the same occasion as Mr. Curling's patient.

UNIVERSITY COLLEGE HOSPITAL.

Renal Calculus for Four or Five Years, with the Passage of Small Stones Composed of Oxalate of Lime.

(Under the care of Dr. HARE.)

HÆMATURIA, or bloody urine, is oftentimes a symptom of the presence of calculi in the kidney, but as this condition of the urine may proceed from a variety of causes, without some other concomitant symptoms, the physician would not undertake to diagnose the presence of renal calculus. When, therefore, we meet with severe pain in one or both loins, with hæmaturia, occasional fits of inflammation of the kidney, and a clear enlargement of the organ, as was present in the following case, we may feel pretty sure there is a stone. In the male sex, in addition to these signs, there is not unfrequently irritation and retraction of the testicles. The correctness of the diagnosis was verified by the passage of a small calculus, which proved to be oxalate of lime. This form is rare from the kidney, but a very remarkable case of the kind is given by Dr. Watson in his work "On the Practice of Physic," in which a small mulberry calculus, studded with crystals, was voided, the general symptoms partaking more of those of ordinary colic. The oxalate of lime calculus is generally known by its nodulated shape and resemblance to a mulberry, but as these are not seen in small specimens, its true nature may readily be determined by heating a crystal or piece of it on platinum foil by means of a spirit-lamp and blow-pipe. The oxalic acid becomes converted into carbonic acid, which is driven off by strong heat, and lime remains, easily known by its turning brown when powdered on turmeric paper.

We are indebted to Mr. F. B. White for the notes of the following case:

E. C——, a female aged thirty-four, rather stout, of florid complexion and healthy appearance, was admitted as out-patient on July 8th, 1858, suffering great pain in the region of the right kidney, which pain had existed more or less severely since the Sunday previous. She stated that she had had at times uneasy sensations in the right lumbar region for four or five years past, but that they had not troubled her much till about five months ago, when the pain became very severe, and she passed some blood, and had continued to do so at intervals up to the time of her admission. She has also noticed that the urine has been loaded with gravel on several occasions during the past three or four years. On manipulation in the region of the kidneys, the right one was found to be somewhat enlarged, and decidedly tender on pressure; the left appeared natural, and there was no tenderness. Dr. Hare diagnosed the case as one of renal calculus, and the patient was put upon a mixture containing spirit of nitric ether, bicarbonate of potash, and tincture of henbane, and directed to use warm hip-baths.

On her appearance at the hospital on the 12th of July, she stated that she had, on the Saturday previous, after a great deal of pain and some hæmorrhage, passed a calculus, which she brought to the hospital for inspection. It proved to be a specimen of the oxalate of lime or mulberry calculus, was about the size of a large pea, and was very rough and nodulated. The patient was of course very much relieved, but she still continues under treatment. The urine was examined on her second visit, and found to have a slightly acid reaction; specific gravity 1.017. Under the microscope no crystals of oxalate of lime or lithic acid were visible. She has since stated that about four months ago she passed a calculus about the size of the head of a large pin, and which, from her description, appears to have been of a similar kind to that recently passed.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

Peculiar Cardiac Sounds.

(Under the care of Dr. EDWARD SMITH.)

THREE patients were recently under Dr. Smith's care, in whom he has ascertained the existence of a sound in the chest which is rare and deserving of notice. It is situate only in the second and third intercostal spaces of the left side, on front and midway between mid-sternum and coracoid process, and is restricted to a space which may be covered by the stethoscope. The following is a short description of each case, with notes of the character of the sound made at each visit:

M. N——, a female, aged twenty-one; single; a servant; has tubercle of both lungs in a state of softening. She has been ill but two months, and then had giddiness and a little hæmoptysis, followed by a little cough, but no dyspnœa or palpitation of the heart. Soon afterwards, and not before, she lost flesh and strength, and had swelling of the feet. She had also pain on the level of the left nipple, which passed up to the left shoulder. She is now thin, very excitable, and has flushed cheeks, with much debility and dyspnœa on exertion. There is but little cough or spitting. The appetite and digestion are good. Tongue clean and bowels regular. The pulse is 136, and respiration 34 per minute; and the vital capacity is only 50 cubic inches. Her height is 5 ft. 1-4 in. On the right side there is great dulness on percussion universally, with very feeble and short inspiratory efforts and a cavity. On the left side the dulness is chiefly below the third rib, with harsh respiration and indistinct signs of a cavity at the third intercostal space, stretching across the chest in the left side. At this place there is a short, sharp thrill with each pulsation of the heart, and there are three between the inspirations. It is not heard during inspiration, because the inspiratory sound has a similar tone and quality, and is louder, but it is heard immediately the inspiration has ended, and with the expiration, and in the interval between the inspirations. It is heard when the breath is held in expiration, but it is then of a softer quality, and seems a little more distant. It is not heard when the breath is held in inspiration. There is a double sound at the base of the heart, but at the apex the sounds are normal. Both pulses are synchronous with the sound under discussion, and are distinct and regular. There is no thrill when the hand is placed over the heart or the lungs, and no peculiar movement in the arteries or veins, but the action of the heart feels tumultuous. She never had pain at this spot, nor any sign but palpitation, and that during a fortnight only.

In a fortnight the sound was still audible at the same place, but somewhat less extensive. The respiratory sounds are still harsh, short, and wavy. She is no worse. In ten days further the sound is still distinctly heard, but it is not heard when she whispers.

Dr. Smith was of opinion that this sound was a modified heart sound, and the sound of the heart could be distinctly heard at the same time in another tone. The quality of the tone of the sound referred to is much that of a rough bronchial respiration.

C. H——, a shipwright, aged twenty-five, single, has tubercle with a cavity in the right lung, and probably deposited tubercle in the left. His vital capacity is 152 cubic inches. On April 30th the heart was healthy. On May 14th he complained of pains in the left side with palpitation; but, except for a foul state of the tongue, he progressed very favourably through the whole year. On December 24th, Dr. Smith discovered the sound referred to in the third space, and then learnt that sometimes he had suffered from pain at that spot. There is a systolic bruit now perceptible at the apex of the heart, and it appears that he had rheumatism badly thirteen years ago. The pulse is 90 per minute, whilst the repetition of the sound referred to is 124 per minute. On February 3d there was a rough first sound of the heart, and the sound under inquiry was still heard in the second and third spaces. He was discharged feeling almost well.

The third case is that of a smith, aged twenty, single, and very pale, thin, and feeble, who two months previously appears to have had an attack of pneumonia on the left side, but he was not at that time seriously ill. He has much cough and dyspnœa and frothy sputa, and his tongue is white and bloodless. There is tubercular deposition and a cavity in the right side, and in the left much consolidation, but chiefly at the base, and there is a wavy respiration. The sound under discussion is heard in the second space on the left side, chiefly in the position before mentioned. The sounds of the heart are heard under the stethoscope fully one inch to the right of the sternum, and do not quite extend to the nipple, so that there is possibly some displacement of the heart, but certainly enlargement of the heart on its right side. In five weeks the sound is still audible, but not with constancy, and it is not heard with full inspiration, nor without respiration. The pulse is 140, and the respiration 21 per minute.

ST. MARY'S HOSPITAL.

Disease of the Testicle and its Coverings, Originating in a Kick from a Horse Twenty Years Before—Castration—Recovery.

(Under the care of Mr. Coulson.)

The following case is interesting in many respects. The disease, which was of long duration, originated from a blow on the testicle, and evidently commenced in the tunica vaginalis. It was confined for many years to that structure, involving at length the proper tunic of the testicle. This organ itself was much less injured than might have been expected; but from the great thickening and distension of the tunica vaginalis, it seems to have been difficult to determine with precision the real state of the testis itself. The rapid manner, however, in which the swelling was reproduced after evacuation of the sac on the 14th of April, led to a suspicion that the tunica vaginalis was one chief seat of disease. This membrane was too much disorganized by chronic inflammation to have been restored to a healthy condition by any mode of treatment, and the removal of the diseased parts appears to have been the only resource.

In our "Clinical Records" is appended a short account of a case of carcinomatous disease, in which a similar proceeding was resorted to by Mr. Cook, at Guy's Hospital:

John H——, aged thirty-two, a butler, and a married man, was admitted on the 12th of April, 1858. According to his own account, the disease originated in an accident at twelve years of age. He then received a kick from a horse, which caused swelling of the right testicle; but as the pain was not severe no medical man was consulted, nor were any means employed to relieve the complaint. On the 4th of April, his child, about three years old, accidentally bruised the patient's scrotum, while in bed; a feeling of sickness immediately resulted, but no pain, until two days afterwards, when the testicle began to swell, and the man experienced great pain in the part, extending to the loin. On the same day he became an out-patient at the hospital. The right testicle was now in a state of acute inflammation, very painful when touched, and grown to about the size of the doubled fist. The house-surgeon immediately opened some of the scrotal veins, and abstracted four ounces of blood. This afforded temporary relief; but as the swelling and severe pain still continued to increase, the man became an in-patient on the 12th. It should be mentioned that he has never laboured under any gonorrhœal affection.

The lead lotion was applied to the part, and calomel was administered until salivation, commencing on the 14th, with the view of inducing absorption of the infiltrated matter. As the tumefied scrotum evidently contained fluid, Mr. Coulson introduced a trocar, and drew off from four to five ounces of a yellowish brown fluid.

15th.—The swelling of the testicles has decreased, but there is great thickening of the tunica vaginalis, and general induration. To resume the calomel and opium pills.

On the following day, however, fresh effusion and engorgement set in; the testis was as large as ever, and the man complained of pain in the right inguinal region, rendered very severe by any movement. As the swelling increased, notwithstanding the active treatment employed, removal of the testicle was resolved on. On the 28th the patient was placed under the influence of chloroform, when the operation was commenced by making an incision opposite the external abdominal ring; this incision was extended downwards to the bottom of the scrotum. The testicle was now exposed and removed, together with the tunica vaginalis. But little hæmorrhage occurred; the edges of the wound were left to glaze, and then brought together with adhesive strapping. The tunica vaginalis was found to be greatly thickened, being more than an eighth of an inch in several places, and its cavity, capable of containing a large orange, had been filled with cholesterine; the inner surface of the membrane was granular, and covered with purulent secretion. The testicle was situate in front of the sac, and so firmly adherent to the tunica vaginalis that it would have been difficult to dissect it away. It was healthy in structure, but rather smaller than natural. The great thickness of its coats was constituted by an hypertrophy of the mediastinum testis behind and of the tunica albuginea in front.

The patient progressed uninterruptedly towards health, and was discharged cured on the 4th of June.

GUY'S HOSPITAL.

Popliteal Aneurism, Nearly Cured by Compression, but Requiring Ligature of the Femoral Artery from Disturbance of the Coagulum.

(Under the care of Mr. Bryant.)

As an addendum to the two interesting cases of popliteal aneurism before recorded in our "Mirror," cured by compression, we to-day record another, in which ligature of the femoral artery was done after compression had been employed. It appears that in this instance pressure was well kept up by the attention of the dresser and students, and in five days the sac appeared to have become consolidated. To be upon the safe side, however, it was ordered to be kept up for another twenty-four hours, and from that time it gradually went back, although pressure was persevered in for ten days longer; and at last a ligature was applied with perfect success. This relapse may perhaps be explained as follows:—As the consolidation became nearly complete, it was the more difficult to detect the slight pulsation present in the sac, and it is feared that the students in the hospital, in their anxiety to maintain pressure upon the vessel above, manipulated the sac, and so disturbed the clot which had formed as to cause the dilatation of the aneurism again. This circumstance will show the necessity hereafter of abstaining from any undue or unnecessary manipulation of the sac, when on the verge or the actual occurrence of consolidation within, a point really of much importance in effecting a cure by compression. This was not overlooked in Mr. Erichsen's case, narrated in our last number, as he was scrupulously particular in not allowing the sac to be examined needlessly, for fear of the occurrence of what has taken place in Mr. Bryant's patient.

We avail ourselves of the notes of the following case, as reported by Mr. Charlton, the dresser of the patient:

Michael C——, aged thirty, an iron-plate worker, residing at Angel-place, Broadwall, was admitted June 9th, 1858. He has been a hard-drinking man, and has suffered rather severely from rheumatism, the last attack occurring about two years ago. About five months ago, he found that after standing for a short time his left leg ached; this gradually grew worse, and about four months ago he noticed a small swelling in the popliteal space, hard, and about the size of a hazel-nut, accompanied by pain and swelling of the lower part of the limb. The swelling has increased daily up to the time of his admission.

Present Condition.—He is an irritable and unhealthy-looking man, about five feet five inches in height. In the popliteal space of the left leg there is a hard swelling about the size of an orange, strongly pulsating; the lower parts of the limb and foot are œdematous, and of a purplish hue. He complains of numbness and pain in the course of the posterior tibial nerve. The pulsation of the swelling immediately ceases on pressure being applied over the femoral artery.

June 9th.—He was put to bed, and ordered an aperient draught.

10th.—Mr. Bryant applied the clamp tourniquet to the femoral artery at twenty minutes past two P. M., and pulsation in the aneurism ceased. Half-past three P. M.: Patient complained of great pain from the pressure of the tourniquet, which had slipped; tourniquet re-adjusted. Forty minutes past four P. M.: Same complaints; the tourniquet loosened, and a weight applied, which the patient held on. Six P. M.: As the patient could not hold the weight with sufficient firmness, the tourniquet was again applied. Nine P. M.: Great pain being experienced, the tourniquet was once more removed; and it became evident that the only efficient means of applying pressure was by constant watching and the use of the leaden weight.

11th.—Sat up with patient all night, and kept the weight steadily fixed. No pulsation in aneurism at twelve P. M., June 10th.

12th.—The patient complained of great pain last night, from about ten till twelve o'clock; since then, and all through to-day, he has kept quite quiet; the pressure has been steadily applied by the kindness of the students, and the tumor is much less. Ordered ten grains of Dover's powder at once, and five grains every six hours.

13th.—The patient slept for two or three hours in the night, but towards morning complained of a good deal of pain and cramp down the inner side of the leg. The bed being much sunk, he was removed on to a mattress, and seems much easier; the pulsation in the tumour is much diminished, and the tumour is very much harder, being quite within the popliteal space.

15th.—The pressure has been very steadily applied, and with the exception of two or three hours' intense pain in the night, the patient has expressed himself as tolerably comfortable. The tumor appears to lessen every hour, and there is hardly any pulsation. The pain in the leg is diminished, and the limb is assuming its natural size. At half-past five the pulsation was very slight.

17th.—For the last thirty-six hours there seems to have been very little if any improvement.

18th.—The aneurism is harder, but the pulsation continues about the same.

20th.—There seems no change. Ordered twenty minims of muriated tincture of iron in infusion of quassia three times a day. Obliged to change position of weight constantly, on account of pain, which became intolerable, and as the circulation through the aneurism was easily arrested by local pressure.

22d.—At twenty minutes past three P.M. applied an india-rubber air-pad, bandaged over the aneurism, and removed the weight from off the femoral. To take ten grains of Dover's powder when necessary.

24th.—Ever since the pad has been applied there has been slight pulsation, as the patient cannot bear any pressure. The india-rubber pad changed for one of lint and wool.

30th.—The patient has become so irritable that it is quite impossible to keep any amount of pressure upon the aneurism, which for the last few days has spread laterally; and Mr. Bryant intends putting a ligature on the femoral artery.

July 6th.—He was put under the influence of chloroform, and the femoral artery tied quite at the lower part of Scarpa's triangle. Ordered ten grains of Dover's powder at bed-time.

7th.—Passed a good night, and complains of no particular pain.

12th.—Progressing very favourably; the wound has united by first intention, except the part in the immediate vicinity of the ligature, from which there is a healthy discharge. Aneurism is firm and becoming smaller.

18th.—The discharge is slightly tinged with blood.

Aug. 1st.—A very slight discharge, which is healthy.

3d.—Ligature came away to-day, being the twenty-eighth day after the operation; and it has evidently been resting on the wound, as it was not thought necessary to apply any force to hasten its removal.

The patient is now convalescent.

CHARING-CROSS HOSPITAL.

Forcible Separation of the Shaft of the Femur from its Lower Epiphysis—Excision of the Knee-joint—Recovery.

(Under the care of Mr. CANTON.)

WITHIN a short period we have witnessed several cases of excision of joints. But there has been an instance very lately at this hospital which possesses features of such novel interest, as necessitating the operation, and differing from any that have hitherto been recorded in our "Mirror," that we would request the attention of our readers to it.

Excision of the knee-joint has now been performed for all the varieties of disease, and for deformities resulting therefrom. But among all the examples collected together in Mr. Butcher's excellent memoirs on the subject, we do not find one in which the operation was done as the result of an injury under such peculiar circumstances as were present in the following case:—The patient, a boy, met with an injury to his knee, which, at first sight, was supposed by the house-surgeon to be a dislocation of the knee. There were several conditions, however, which went to show that it might not be that accident; in addition to which, the accident itself is of very rare occurrence. On this point the late Mr. Samuel Cooper observes, in his "First Lines of Surgery," when speaking of dislocations of the knee: "All varieties of these are exceedingly rare, yet we occasionally read of them; and perhaps in the course of twenty years there may be one case brought into a large hospital."—p. 716. We think this is the experience of most surgeons. But cases do now and then come under our notice; as for example, a partial dislocation of both knees in a female aged twenty-two, at St. Bartholomew's Hospital, under Mr. Coote's care; and a dislocation of one knee in a man aged fifty-four, under Mr. Gant's care, at the Royal Free Hospital, both given in our "Clinical Records" of last year.

Then again, when we come to compare the security of the knee-joint—due to the number and strength of its ligaments, and the fibrous involucra derived from the expansion of the neighbouring tendons—with the means of union between the shaft of the bone and its epiphysis at this period of life, we shall find that great violence applied to this joint will be more liable to cause the quasi-fracture noticed in the case than a direct luxation. It is easy to comprehend, therefore, why in the young an injury will detach an epiphysis in other joints besides the knee. Nevertheless, this very important point is overlooked by many surgeons; and on reference to Mr. R. W. Smith's work on "Fractures in the Vicinity of Joints," we find that he makes no mention even of this form of accident.

A boy, aged eight years, was admitted into the hospital, having suffered the above-mentioned injury, and received also an extensive wound of the scalp at the back part of the head, from which a large quantity of blood had been lost. The exact mode of production of the mischief could not be ascertained. It was known, however, that the boy whilst riding behind a cart had fallen to the ground, and it was believed that his knee had become entangled between the spokes of one of the wheels as he fell. On first view, the knee presented the appearance of a dislocation of the femur outwards, the deformity, of course, being very great. Manual examination, however, soon proved that the movements of the joint were intact, and on the employment of slight extension and counter-extension in a bent position of the limb, the form of the part was readily restored by pressing the lower portion of the thigh inwards at the same time that the upper part of the leg with the femoral condyles was directed outwards. There was no doubt but that the shaft of the femur had been fractured, or rather torn from its yet cartilaginous epiphysis. Adjustment being accomplished, the limb was placed in a slightly flexed position on a well-padded splint, with one on either side of the thigh, the whole being secured by a bandage. The night was passed in great restlessness, though an opiate had been administered. The next day severe pain was complained of in the knee, and which arose from mal-position of the fragments consequent on the patient's inquietude. In effecting re-adjustment the soft parts, against which the lower end of the femoral shaft had been driven, were seen to be much ecchymosed, and in a few days—a slough having formed there and separated—the bone protruded, showing at its lower surface that appearance which characterizes the part for attachment with the articular extremity. Various means were adopted with the view of keeping the parts properly *set;* but in consequence of the severe nature and painful state of the scalp wound, the boy, besides his general restless state, was continually throwing his body towards the opposite side of the injury, so that his head might recline sideways on the pillow; hence the femur was proportionately directed outwards, protruding through and irritating the wound, by which it had so lately found egress. Suppuration soon took place, and threatened to become profuse; constitutional irritation ran high; the appetite had failed; sleep could hardly be procured; indeed, it became evident that, unless some decisive measure were speedily instituted, the patient would die.

Under these circumstances Mr. Canton, in pursuance of the conservative surgery of the present day, determined to excise the knee-joint. The incisions formed together an H, the opening already described being included in the outer one. After the joint ends of the femur and tibia, together with the patella, had been removed, a very thin piece was sawn from the free end of the thigh-bone, so that more even adaptation with the tibia might be ensured. The patient during the operation was under the influence of chloroform. No attempt at primary union took place. The continual restlessness of the patient defied all the means adopted to quiet his system and maintain the limb at rest. About an inch of the femur projected, and could in no manner be kept reduced; and it becoming evident that this part tended greatly to the maintenance of irritation, at the same time that it was quickly passing into a state of necrosis, Mr. Canton removed it with a small hand-saw. The edges of the wound could now be again brought together, and were so maintained, whilst an opening was preserved on the outer side, so as to allow freedom of exit for the discharge, which shortly began to assume a more healthy character. Since this period the little patient has progressed most favourably, and the wound has now nearly healed up.

SOUTH LONDON OPHTHALMIC HOSPITAL.

Case of Sudden Presbyopia in a Boy Ten Years of Age.

(Under the care of Mr. Holthouse.)

We avail ourselves of the following cases from the notes of Mr. G. Gill, the resident medical officer:

E. R——, aged ten, a healthy-looking, fresh-coloured boy, was brought to the hospital on the 29th of April, 1858, for impaired vision, which had come on suddenly a fortnight previously. He stated that while he was in school a cloud seemed to come over both his eyes, so that he could no longer see to read or write. This was accompanied by dark muscæ, which he still suffered from.

At present the boy cannot read the largest type, though he can distinguish the letters on a coffee-house sign on the other side of the street. The pupils are dilated and movable under variations of light, though somewhat more sluggish than natural. No other abnormal appearances are perceptible. The tongue is foul, and the countenance somewhot heavy. An emetic was ordered.

May 3d.—The emetic acted well, but did not improve the symptoms. The pupil of one eye having been dilated with a solution of atrophine, a dark purple hue was reflected from the bottom of the eye, caused probably by intense venous congestion. Two leeches were ordered to each temple, and two grains of calomel with eight of rhubarb were prescribed every other night.

10th.—The leeches bled well, and the powders acted freely, but there is no improvement of vision. The boy looks pale, he feels ill, and complains of pain in the abdomen.

The patient was not seen again till the 20th, having had measles in the interim, and lost a brother and sister from the same complaint. He now feels much better, and his sight he thinks a little improved, but he looks delicate and feels weak. Half a grain of quinine, with five drops of dilute sulphuric acid, were prescribed three times a day.

27th.—The patient looks and feels much better, and his sight is greatly improved. Repeat mixture.

June 3d.—He is quite well, and sees as well as he ever did. He can read the smallest type with the greatest ease. Discharged cured.

Partial Loss of Vision of the Right Eye.

(Under the care of Mr. HOLTHOUSE.)

L. T——, aged forty-three, fruit-porter, applied at the hospital, on the 9th of February last, for partial loss of vision of the right eye, which came on suddenly. On looking at any object with that eye, a black patch covered its centre, but there was "daylight all around" the patch. While waiting to be seen, he had amused himself in trying to read the large print on the walls of the hospital, and found he could distinguish black letters on a white ground, but not white letters on black. The pupil of the eye affected was sluggish in its movements, but dilated on closing the good eye. Atrophine having been dropped into the eye, when the pupil was fully under its influence the patient said he saw better, and that the black patch had vanished, but there was a haze instead. The ophthalmoscope revealed no extravasation, but the vessels were numerous and much enlarged.

The man gave the following curious history of this attack:—Ten days ago, when he was about to rise in the morning, he felt very ill and uncomfortable on the left side of his chest, "as if his heart was bleeding," and at the same time there was a great throbbing at the temples and swelling of the veins of the head. Immediately afterwards he became insensible, and his friends told him on his coming down stairs three hours afterwards that he had had a terrible fit. He felt ill the whole of that and the following day, suffering from pain in the head and limbs, but did not perceive anything the matter with his eyes. The third day after the fit, on waking in the morning, whilst lying on his left side, he opened his right eye to see whether it was daylight, but found that he could not see with that eye; and on getting up he asked all his neighbors whether they saw anything in the eye, but nothing could be seen. He went about his work on this day, but narrowly escaped falling off the planks into the river whilst going from one vessel to another with fruit. A few days afterwards, on going to his nephew's to sew shoes, which he was in the habit of doing when not otherwise occupied, he found he could not see to do it; he could not make the hole with the awl in the right place, and putting the bristles through he "could not manage at all;" he therefore came at once to the hospital.

A blister was applied to the right temple, and ordered to be dressed with savine cerate. A gentle aperient was prescribed every other morning.

Feb. 20th.—The field of vision is becoming larger and the central patch less dark; objects can now be seen through the patch, indistinctly and coloured; white paper, he says, appears like very old paper. Both eyes were to-day examined with the ophthalmoscope; the vessels of the good eye are smaller than those of the other, and a something morbid is seen towards the outer side of the optic nerve of the bad eye; it has a glistening, micaceous appearance, as if a small quantity of blood, brain matter, and cholesterine were mixed together; this peculiarity is not seen in any other part of the retina. Ordered quinine mixture, one ounce, three times a day.

March 4th.—The vision continues improving, though a haziness still obscures the centre of all objects gazed at. He is now in good general health, and considers his sight nearly restored. He mentioned to-day that at the time of the attack he was suffering from a bad cough, and that during each paroxysm he was obliged to put his hand to his right eye and press it forcibly inwards, as it felt as if it would be forced out of its socket. The same sensation was experienced in the other eye, but in a less degree.

Clinical Records.

IMPACTION OF THE FRAGMENTS OF A MULBERRY CALCULUS.

IN speaking of obstacles to the operation of lithotrity, Mr. Coulson says, in his work on the subject: "As for calculi which are both hard and of very large size, they present obstacles that cannot be overcome without great risk to life, and are therefore by universal consent reserved for lithotomy." It may happen, however, that the surgeon cannot determine the true character of the stone until it is actually between the beaks of the lithotrite; but if he then finds, from the extreme resistance offered to its crushing, that it is the mulberry, he will get rid of it by lithotomy. We have the opportunity of relating a case in illustration, but with the addition that the stone was broken, and a fragment becoming impacted in the urethra necessitated lithotomy.

A man, twenty-nine years of age, was admitted into Guy's Hospital, under Mr. Birkett's care, with a stone in his bladder, which had been present for some years, but he had laboured under symptoms of that affection as long as he could remember. The size of the stone appeared to be suitable for crushing, and he was submitted to that operation on two occasions. At the first, the resistance offered was such that although the lithotrite actually bent, yet the stone would not break; it was grasped a second time, and when the crushing powers of the instrument were exerted to the utmost a sudden loud snap was heard; so loud, in fact, as to be audible throughout a very large ward, and it was thought for the moment that the instrument had broken, but examination showed that it was the calculus which had yielded. It was composed of oxalate of lime, and this accounted for its extreme hardness. After the second crushing a flat fragment got impacted in the prostatic portion of the urethra, and could only be got rid of by lithotomy, which was performed on the 24th of August, when the stone (broken in two) and this fragment were removed, having become slightly encrusted with phosphatic deposits since the crushing. There were no small fragments, such as are met with in crushing an ordinary calculus. In consequence of the impaction which had taken place the patient suffered considerably from symptoms of disease of the bladder itself, and Mr. Birkett deemed it safer to remove the stone by lithotomy.

NARCOTIC INJECTION TO RELIEVE PAIN.

In our "Clinical Records" we gave a description of an attempt to remove the supposed remains of a rusty nail from the back of the hand of a lad of eighteen, in University College Hospital, by Mr. Erichsen. He had been a sufferer from constant pain in that situation latterly, which was relieved for a short time after the operation, but returned again in full force. So severe was the pain now that the lad was a great sufferer indeed; and to give him the chance of obtaining permanent relief, a plan was tried by Mr. Henry Thompson, on the 1st of August, recommended by Dr. Alex. Wood, of Edinburgh, in 1855—namely, of injecting a few drops of morphine over the seat of the affected nerve. This was hardly a fair case to try this method, because it is intended to prove serviceable in cases of neuralgia of a different character to that in the present instance. By means of a small syringe, about twelve drops of solution of morphine of the Edinburgh Pharmacopœia were injected beneath the skin, close to the seat of pain, which was so severe that the lad could scarcely bear his hand to be touched. The old wound had perfectly healed. Immediately after this operation, the pain, if anything, was increased, and no amelioration ensued. In fact, as Mr. Wilkinson, the house-surgeon, informed us, the pain the next day was so great that the hand felt as if starting forwards. The pain in this case hardly runs along the course of the nerve, but seems to be fixed in the one spot, as if in the centre of one of the metacarpal bones, and therefore does not strictly come within the category of those in which anodyne injections are considered proper. But as the boy's sufferings were so great, Mr. Thompson thought he would try this new plan, which has not succeeded. Belladonna and other means, we believe, had been tried here without success.

BUCCAL EPITHELIOMA—SILVER SUTURES.

A well-marked case of this form of cancer, affecting the right side of the mouth and cheek, was treated by operation by Mr. Wordsworth, at the London Hospital, on July 27th. The disease was rather extensive, and engaged the whole of the angle of the mouth, encroaching somewhat upon the lips. The surrounding integuments of the cheek were of a deep crimson colour, although not ulcerated. The patient was a labourer in the London Docks, fifty-two years of age, and had been an inveterate smoker, consuming ordinarily as much as half an ounce of tobacco per day, and the stem of the pipe being invariably placed at the present seat of the cancer, which first commenced to show itself about ten months ago. There was no hereditary predisposition, and the general health was good. A large V incision was used to remove the disease, and the edges of the wound were brought together by means of the silver-wire sutures. Union by adhesion ensued, and when we saw him on the 8th of August the wound was quite healed; the mouth, however, was small, but not too small for his ordinary wants, nor was there any perceptible deformity beyond the discoloration of the cheek. Our only fear is that the disease may return at a later period, in consequence of this condition remaining persistent.

AMBUSTIAL DEFORMITIES OF THE FACE.

These were two instances of deformity of the face and neck, resulting from the contraction of the cicatrices of old burns. One of them, possessing features of interest from the extent of the contraction, occurred in a young woman in King's College Hospital, who was in a deplorable state when first seen. A large cicatrix from a burn existed on the right side of the neck, and the contraction was so great as to draw the mouth to the middle part of the neck. An attempt had been made by Mr. Fergusson to relieve this condition, and a band of membrane existed at the lower margin of the lower jaw, which gave the appearance of two mouths, the head being drawn also to one side. The tissues were freely divided, and a change for the better was effected, the lower part of the mouth being closed up altogether, and the saliva, which before was constantly dribbling, now flowed from the right angle of the mouth only. The operation performed on the 14th of August (which consisted in removing a V portion of the right angle, and bringing the edges together) was for the purpose of closing this passage at the side of the mouth, and thus prevent the further flowing of the saliva, at the same time improving the patient's personal appearance; and it will be a great matter for the poor girl if these desirable ends are attained.

The second instance was in a little girl at Guy's Hospital, the left angle of whose mouth was drawn downwards in consequence of a burn, with the formation of a thick band of tissue extending to the margin of the ramus of the lower jaw. This band was divided by Mr. Cock three months ago, but without success, as the contraction recurred as healing ensued. He therefore, on the 17th of August, took away a V portion of the lip at the left angle, including in it this band of fibrous tissue, bringing the parts together by sutures, and the result has been quite satisfactory.

These operations for the removal of deformities are very frequently performed, and the success varies with the extent of surface denuded. As a rule, it is better to manipulate with portions only at a time, and, when they have healed up, then with others, until the entire deformity is cured. There is great risk of sloughing if too great a surface is exposed at one operation.

THE RESULTS OF SYPHILIS ON THE MOUTH AND ANUS.

It is somewhat singular, in the history of syphilis, that we should find many examples of the disease travelling out of its natural channel and invading others to which it ought to be a stranger. Instances of the kind come under the notice of almost every hospital surgeon. Some of these we have previously adverted to in our "Clinical Records," in which chancrous ulcerations were present on the lips in one patient, and in the rectum in another, the latter attended by an amount of inflammation and irritation which would hardly be expected. There is a female in the Magdalen ward of St. Bartholomew's Hospital, forty-two years of age, under Mr. Coote's care, who now has carcinoma of the rectum, with stricture of the gut some inches up. She was admitted on the 27th of August, but it is believed she had been previously under treatment for syphilitic disease, more especially as there seem to be distinctive traces of it about her person just now. We think it questionable whether the rectal disease, as true carcinoma, was idiopathic, and not preceded by the remains of syphilis which had undergone malignancy. We by no means offer a positive opinion, but simply throw it out as a suggestion. It, however, recalls to mind a case of stricture of the rectum, with a vesico-vaginal fistula, under Mr. Curling's care, in the London Hospital, which was the result of syphilitic disease in that part.

In the same ward is a young woman, with distinct and well-marked elevated patches, situated on the very centre of the tongue. They have been present but two months, and, as Mr. Coote stated, are quite characteristic of the disease.

Not less curious is the case of a female, in the Royal Free Hospital, at the present time, under Mr. de Méric's care, who has quite a profusion of warts about the genital organs, and which extend backwards to the anus, and are present within the rectum.

There is this much to be said about the anomalous situations of the venereal disease just referred to, that they are found only in the very lowest orders, and generally in the most abandoned.

CONSERVATIVE SURGERY.

We have not unfrequently placed before our readers examples of diseased joints in which resection had been successfully performed—in cases, too, which many surgeons would not have hesitated to treat by amputation. Conservative surgery so far was of inestimable value in saving the limbs. Yet we must observe, that other means besides excision, will do good occasionally, and equally save limb and joint, which, perhaps, had already been condemned to amputation. In St. Bartholomew's Hospital there are several cases of diseased joint—the hip, the knee, and the elbow—which seem to be doing well under the treatment pursued. In those wherein contraction of the knee has ensued, straightening is being accomplished by the use of Ferguson's irons and boot, as employed in the Royal Orthopædic Hospital.

There is a little boy in Abernethy ward, ten years of age, who received a blow with a poker a year ago upon his right knee, which penetrated the joint. This was followed by inflammation, destructive disease, and ulceration of the cartilage. All the symptoms of disorganization, suppuration, &c., were present, and the leg was condemned for amputation. It, however, was reserved as an illustration of true conservative surgery by Mr. Skey, who treated the boy, so that he recovered with a bent knee. He was lately under Mr. Coote's care, who has used the boot and irons in common use at the Orthopædic Hospital, with a cog-wheel, &c., and the leg is not only straight, but the boy can walk about the ward with the utmost facility, and, so far as we can judge, is quite cured.

There is another child, a little girl, eight years of age, in the hospital, in whom excision of the left knee-joint was contemplated for extensive disease, the result of a fall ten months before, with the formation of an abscess in the calf six weeks ago, evidently in connexion with the joint. She was admitted on the 28th of April, the joint had become contracted, and the abscess spoken of formed while in the hospital; and yet under careful treatment this child has got quite fat and hearty, with a good complexion, and the limb is becoming straight under gradual extension by the same means as in the previous case.

These cases, and many others, show what can be done to save both joints and limbs; it matters not what method is chosen, so that the desired end is attained.

INJURY TO THE WRIST.

On the 17th ultimo a man was brought into Guy's Hospital, about thirty-four years of age, who had an hour before sustained an injury to his right wrist. It appeared, from the history which he gave, that he was driving a gig, and was turning a corner rather sharply, holding the whip in the injured hand at the time. He was suddenly thrown out and fell on his hand and wrist and his side. The wrist was much deformed; there was a considerable projection outwards, which was due to displacement of the lower end of the ulna, which formed a prominent point; whilst the radius itself was broken in several bits about two inches from the joint, the fracture running in a somewhat oblique instead of a transverse direction. There was no difficulty in diagnosing the true nature of the injury here. There was an entire absence of the unmistakable appearances observed in Collis's fracture of the wrist, as there was no projection either in front or rear, but solely at the sides, and the crepitus was very distinct. Mr. Birkett set the fracture and reduced the dislocated ulna under chloroform, and placed the hand and forearm on a pistol splint, carefully bandaging it in its proper position, and the man was allowed to return to his home.

Medical Annotations.

"Ne quid nimis."

A TASMANIAN SANITARIUM.

To the sick man tossing on the bed of pain there comes often a vision of green fields; and as the fiery pangs abate, and health advances to him with slow, uncertain steps, that which was a wandering fancy of delirium, often grows to be a passionate, earnest longing for the fragrant breeze and verdant glory of the country. "Oh, that I were in the country again, I am sure that I should then soon be well!" is a familiar cry in the ears of every hospital surgeon, and one with which he sympathizes and tacitly acquiesces. The thirst for such gentle influences as Nature only gathers around them, is a faithful instinct with the convalescent. These are, indeed, the swiftest and the surest agents of their cure. After a time, residence in an hospital, although surrounded by the most skilful adaptations that talent and experience can devise, ceases to be a boon. It becomes then a curse. When medicine has soothed the active inflammation which threatened to destroy; when surgery has presided over the union of the fracture or the healing of the wound, there comes a time when the patient, though still in sore need of tendance, of supervision, and repose, suffers more from the miasm of an "hospital atmosphere" than he can gain by the medical care. Hence the utility of a "sanitarium" to all large hospitals. But to army hospitals they are an imperative necessity. From the institutions of London, the patient may be, and often is, borne to the pleasant and beneficent retreat at Walton—to that admirable institution at Margate. They are received by friends and relatives into farm-houses far removed from urban pollution. Not only are army hospitals of necessity deficient during emergent periods of war—as now in India—in the comfort, the freshness, and comparative purity of those we possess in London, but the soldier must pass from the hospital to the ranks, or to the transport ship. The journey from India to England is fearfully long and mortally exhaustive to a certain proportion of the invalids. Hence the urgent necessity for military sanitaria at easy distances from India, where the enfeebled, though convalescent, men might recruit their strength. That this want was present to the minds of the authorities at an early period of the war, was made evident by the selection of Aden for the purpose—a place so stagnant, so deserted, and so unhealthy—that we were moved to protest with effectual vigour against its adoption as a site for such an establishment.

It would seem that now—late indeed, but still in time for some good use—the people of Tasmania have been preparing to call the attention of the Government to the facilities and advantages which they can offer for the erection of such an institution. The soldiers would find there a beautiful country, blessed with a temperate climate. All this was occupied by convicts; but is now no longer so. The Tasmanians have in this proposal a shrewd eye to business, which would be mightily promoted by an influx of troops and Government officials. But having an eye to the interests of the army, we think that it might indeed be a most valuable resort, and would urge the consideration of its claims upon the authorities.

ELECTRO-DENTISTRY.

The proverbial torture of the toothache, which "no philosopher could ever yet bear patiently," strut it as they will with stoic pride, points with a lively interest to the American suggestion for inducing electric anæsthesia in extraction. It is well known to physiologists, that a continued galvanic current along the course of a nerve destroys its sensibility. It is on this principle that the dental operator proceeds, when he sends a current through the tooth at the moment of extraction. There are obviously many difficulties in the perfection of the mechanical details. The letters addressed to *The Times* by various gentlemen of late have rather the aspect of the puff oblique than the character of useful scientific communications. Obviously the pages of a daily journal are not those best fitted for the discussion of a question of professional practice; and although these letters may serve the purpose of publishing the names and addresses of some half dozen dentists who are seeking practice, they are neither likely to advance the interests of the art nor to heighten the reputation of the writers. We publish an interesting communication from "A Member of the College of Dentists of England" on the subject, and have received some important practical notes from Mr. Adolphus Hart. The subject cannot fail to attract the attention of our most eminent practical dentists, and the value of this means will be completely tested.

A MIRACLE-MONGER.

We are so frequently accustomed to find ourselves in the presence of miracle-mongers, and have so often witnessed the rapid series of phenomena by which these gentry fade from that proud aspect to the humbled front of detected impostors, that we present the subjoined specimen of the craft with a less surprised indignation than that which evidently moved the mind of the excellent gentleman who forwarded it to us. "Humanitas" addresses the editor of the *Maryport Advertiser* thus:

"SIR—Mr. Hutton, a gentleman who a few weeks ago took up a temporary residence at bathing quarters at Flimby, and there was led to notice cripples on crutches, immediately applied his skill to their relief. His fame soon became so notorious in the village and neighbourhood, that his lodgings were daily beset with the maimed. Whence he has derived his knowledge of bones and joints I care not to know, but the marvellous facts that have come to my knowledge of the relief he has afforded to suffering humanity demand notice. I shall give you a few samples of his cures. A boy, named Thompson, of Mawbray, had been eight weeks under two professional men, and walked very lame with the aid of a crutch and a stick. The bandages and pasteboards, which were manifold, were removed, and the limb simply submitted to a warm bath, so as to relax the rigidity of the muscles, and the dislocated ankle, which had been neglected for eight weeks, put in at once, and the young man walked away, leaving his crutch and stick behind! Robert Mayes, who was so severely crushed between two vessels in the harbour, a few weeks ago, and had been a great sufferer, moving with great pain and difficulty, was submitted to the usual warm bath, and then with the greatest ease in the world, the dislocated joints were placed in their sockets, and the man walked through the streets of Maryport, bearing his crutches across his shoulder! This poor man had both thighs, a knee, and an ankle dislocated; and Mr. Hutton, having set all these bodily derangements to rights, quaintly said—'Now, my man, let me see if your neck is is not out of joint also.' Joseph Haugh, who has been lame for the last four years, from brutal usage he received when a policeman, has been by the same simple remedy perfectly restored, and has cast away his stick. A poor man, named Fletcher, who may have been seen going on crutches at Flimby for the last three years, and receiving parochial relief, was subjected to Mr. Hutton's talismanic bath; and when the rigid muscles were sufficiently relaxed, the leg was gently raised till the thigh-bone dropped into its socket, and the poor sufferer walked forth at once restored to perfect strength, and is now able to follow his work! The son of Mr. Dalzell, of Stainburn Hall, who has been far and near under some who are esteemed celebrated bone-setters and surgeons, put himself under the treatment of Mr. Hutton, and is now all right! What say you to old Mrs. Brown, eighty-seven years of age, who has been so lame for the last few years that she had to be borne up stairs; and yet the same remedy, in the skilful hands of this modern worker of miracles, enabled Mrs. Brown, in a few minutes, to walk down stairs and get into her cart without assistance! I could go on enumerating upwards of a hundred cases that have been successfully treated during Mr. Hutton's three weeks' residence in Flimby. In one day he had eleven at Flimby before leaving his lodgings; and, on reaching Maryport, there were twenty-nine more waiting for him, all of whom he sent home rejoicing without their artificial means of locomotion."

We need not continue the quotation. Such an epistle can have but one termination, and that by publicly sending round the plate. The editor sagely suggests that two or three of what he very naively calls "the most flagrant cases of cure, should accompany the collectors of subscriptions." Flagrant cases, indeed, they are in this story; but probably he has suggested almost the only condition with which it would be impossible to comply.

CHLOROFORM IN SURGERY.

THE question of the administration of chloroform in the various operations of surgery has been necessarily much discussed in connexion with the recent catastrophes at Epsom and at Dorking. The discussion has not, however, been carried on with great acuteness or deliberation, nor has any suggestion been made public which deserves to be considered. A consulting surgeon addressed *The Times* in a letter, which for some strange reason was afforded the prominence of large type, but which certainly had none of the merits which should entitle it to that distinction. The great deduction which is to be drawn from the recital of these accidents appears to be, that this dangerous but most blessed vapour should never be administered in uncontrolled quantity and strength upon a napkin. Dr. Snow has left us the instrument which bears his name, by which the quantity administered can be most accurately regulated and registered, and the dilution of the vapour ensured up to any point. But, on the other hand, when, chloroform is administered upon a napkin or upon a handkerchief, its dilution cannot be controlled. At one breath it is swallowed almost pure, and at the next greatly admixed with air, while the patient is surrounded by an atmosphere of chloroform, which is attended with great danger. If we know that we have a dangerous weapon, our rational impulse will certainly be not to discard it or to disuse it when needful, but to study the means of controlling it and disarming it of its terrors. Chloroform on a napkin is a dangerous and uncontrolled agent; administered through Snow's inhaler, it is robbed of half of its danger, by the more perfect manner in which we can control its inhalation.

Reviews and Notices of Books.

Pathologie und Therapie der Muskellähmung. Von Dr. HERMANN FRIEDBERG. Mit 4 tafeln abbildungen. Weimar. pp. 349.

ALL forms of paralysis not offering immediate mechanical or traumatic causes for their production were at one time regarded as dependent upon some morbid influence affecting the nerves at their cerebral or spinal centres, or between these and the paralysed part. Afterwards, however, it became evident that many cases of loss of voluntary motion could not be traced, so far as morbid anatomy guided us, to lesions of the nervous centres, or of the great nervous cords, and that the history of the *lædentia* and *juvantia* went to show that the peripheral extremities of the minute divisions of the nerves were the parts first affected. Hence was established an *excentric*, as well as a concentric, form of paralysis. In still later times, cases were recorded in which the paralysis was so general, the atrophy of the muscular tissue so considerable, the want of any evidence of the operation of external influences on the centric and peripheral expansions of nerves so apparent that many pathologists regarded such cases as rather of primarily muscular derangement than of nervous debility. Hence arose a *muscular* paralysis, as well as concentric and excentric nervous forms of the affection. A *muscular* paralysis, however, appeared to many so vague, if not so impossible a thing, that it was affirmed that, although it must be admitted the muscular tissue in these cases was either degenerated, atrophied, &c., &c., very early in their course, and helped to maintain the disease, especially negativing benefit from treatment, yet that the origin of the disease was truly in the nervous system, but was of such a character as directly induced the derangement of the muscular tissue as a *secondary* result. The nutrition of the muscle was bad, and greatly helped in giving rise to the symptoms, but such lesion of nutrition only ensued because of some pre-existing lesion of the nervous system. Romberg, Virchow, Cruveilhier, Valentiner, Cohn, Leubuscher, and others, more or less supported this view of the case, referring the primary nervous lesion to atrophy of the roots of the anterior spinal nerves, neurotic atrophy, hardening of the grey central substance of the spinal cord, &c. But a more careful inquiry into these instances under the direction of modern physiology and pathology, have led several observers to adhere to the doctrine that the paralysis is one essentially and primarily arising in the *muscular* system. Aran, Bouvier, Oppenheimer, Wachsmuth, Hasse (?), Meryon, &c., have supported this view, respectively adopting muscular atrophy, fatty degeneration of the muscles, excessive irritability of the muscular tissue, disturbed nutrition, &c., as the primary mischief. A "critic," however, of the whole matter was greatly wanting, hence nothing could really be accepted save the probable truth that there existed a *myopathic* paralysis—a paralysis *ex alienata musculorum nutritione*, as well as a neuropathic paralysis, but what its exact nature consisted in we did not know.

Dr. Friedberg's treatise comes to our assistance in this difficulty. It is a critic of the whole matter. It results in showing that there truly exists a "myopathic" paralysis, in which the lesion of nutrition of the muscular tissue is a primary phenomenon, and not a secondary occurrence, as in neuropathic forms. This "lesion of nutrition" is, according to our author, essentially a "genuine inflammation" of the muscular tissue It may be induced in different ways—e. g., by continuity of action from diseased neighbouring organs, by injury, by a sudden change of temperature, by certain blood diseases, by muscular hæmic plethora, anæmia, &c. The results of this muscular inflammation are—pain, muscular relaxation, loss of power, atrophy, lividity and coldness, anomalies of movement and of position, myopathic contracture, abnormal relations (and their consequences) of the affected muscles with the joints, myopathic luxation, &c.

Finally, after a lengthened inquiry into its nature, the author discusses the method of treatment of this myopathic paralysis. In it electricity is made to constitute a most important item.

We have much pleasure in being able to introduce Dr. Friedberg to the notice of our readers, and to recommend to them the perusal of his book, which must be admitted to be the most complete treatise we as yet possess upon this obscure yet interesting subject.

On the Nature, Causes, Statistics, and Treatment of Erysipelas. By Peter Hinckes Bird, F.R.C.S. (by Exam.) &c. 8vo. pp. 60. London: Churchill.

In this essay the writer states that what he particularly desires to insist on is that the characteristics of erysipelatous inflammation may be manifested in other tissues than the skin or subcutaneous cellular membrane—in fact, that erysipelas often affects the internal organs of the body, and he appeals in support of his opinion to a remark of John Hunter (On the Blood, 1794, p. 270). He says—

> "The result of observations I have made on the integument of patients who have died of this disease is, that in the most superficial form it is seated in the papillary layer of the dermis, and that as the disease becomes more complicated the more deeply seated parts are involved. Thus, beginning at the papillary layer of the dermis, it extends into the deep stratum or corium, then to the adipose or cellular tissue; it may thence involve fascia, muscles, and intermuscular cellular tissue. In simple erysipelas, there is merely serous effusion; in complicated erysipelas, destruction of the capillaries, and all the tissues it invades."—p. 12.

As to the treatment, little that is new is laid down. The author's experience, however, does not lead him to speak in favour of the new-vaunted remedy, tincture of the sesquichloride of iron, although he admits it may be a useful adjunct to alcoholic stimulants, and is especially indicated in albuminuria coincident with, or consequent on, general erysipelas. In an appendix, which is much longer than the essay itself, the author states that, although it is supposed that women are more liable to erysipelas at the catamenial periods than at other times, from his own experience he concludes that such is a mere accidental circumstance. Amongst the numerous statistical tables scattered through the treatise, is one showing that the respiration is nearly always increased in frequency during the first access of the disease, though it afterwards declines in frequency. The essay contains abundant notes and other references to authorities on erysipelas.

Chapters on Medical Physiology. By Sir Henry Holland, Bart., M.D. Second Edition, Revised and Enlarged. Fcap. 8vo. pp. 347. London: Longman & Co.

This is the second edition of a work founded chiefly on chapters contained in the celebrated production of the author, entitled "Medical Notes and Reflections." The present differs little from the former edition, except in occasional slight changes in the order of the chapters. It is unnecessary to dwell at any length upon the contents of this volume. They evince profound learning without pedantry, and it may be fairly said of them, that if not conclusive upon all points on which they treat, they may be regarded as a masterly exposition of a very difficult subject.

On the Treatment of Sprained Ankle. By P. Hood, M.R.C.S. London: Churchill. pp. 30.

A very troublesome injury which the surgeon has to treat, one which remains uncured sometimes for a long period, is a sprained ankle. Mr. Hood recommends a very simple and most efficacious plan of treatment, which consists in strapping the foot with plaster from the toes to some inches above the ankle-joint; a bandage is then applied over the whole foot. This is repeated for three or four days, with modification according to the severity of the sprain, until a cure is effected. The author states that his experience bears him out in recommending the plan adopted.

Hooper's Physicians' Vade-Mecum. By W. A. Guy, M.D. Sixth Edition. Foolscap 8vo. pp. 696. London: Renshaw.

This edition of Hooper's useful "Vade-Mecum" contains all the information, improvements, and discoveries in medicine since the publication of the last edition. It is unnecessary to say more of a work so well known and appreciated.

Anatomy, Descriptive and Surgical. By Henry Gray, F.R.S. Lecturer on Anatomy at St. George's Hospital. Illustrated by 363 large Woodcuts, from Original Drawings by H. V. Carter, M.D., Professor of Anatomy in Queen's College, Bombay, late Demonstrator of Anatomy at St. George's Hospital. The Dissections jointly by the Author and Dr. Carter. pp. 782. London: J. W. Parker & Son, West Strand.

The student of anatomy and surgery of the present day enjoys a great advantage over his predecessors, in having at his command works on the subjects of his studies, which not only facilitate his labours, but enable him to pursue his investigations in a scientific and practical manner. We are bound to say that no treatise that has issued from the press for a great number of years is more calculated than the present one "to furnish the student and practitioner with an accurate view of the anatomy of the human body, and more especially the application of this science to practical surgery." The work is divided into the following sections:—"Osteology, the Articulations, the Muscles and Fasciæ, the Arteries, the Veins, the Lymphatics, the Nervous System and Organs of Sense, the Viscera, Regional Anatomy, and Microscopical Anatomy."

All these subjects are treated of and illustrated in such a manner as reflect the highest credit upon the author and draughtsman, and the knowledge of anatomy conveyed to the student is rendered more valuable by the introduction, under each subdivision of the work, of such observations on practical points of surgery as show the necessity of an accurate acquaintance with the part under examination. It is the first time that such an endeavour has been made by an English anatomist. It is a work of no ordinary labour, and demanded the highest accomplishments, both as anatomist and surgeon, for its successful completion. We may say with truth, that there is not a treatise in any language, in which the relations of anatomy and surgery are so clearly and fully shown.

The author, in the section on "Osteology," has wisely adopted the plan first pursued by Mr. Holden, by showing, in dotted lines, the attachments of each muscle. For this aid to the student, Mr. Holden is justly entitled to be considered as an able and successful inventor, and the thanks of the student in osteology are eminently due to him for this useful suggestion. Of all the subsequent sections of Mr. Gray's "Anatomy," it is impossible to speak in any terms excepting those of the highest commendation. The descriptions are admirably clear, and the illustrations, copied from recent dissections, are perfect. If we wished to point to any portion of the work which portrays extraordinary excellence, we should give as an example, the section on "Regional Anatomy." This is at once concise in expression, and full in detail. It is recommended not less by its novelty than by its high utility to the student and to the surgeon. But each department of the work shows an equal care, and a like acquaintance with all that is newest in anatomical science, and most useful in anatomical teaching. The description of the development of bones is most original and simple; the articulations are described with a perfection of system hitherto confined to French authors. The significance of the knowledge of muscular origins and insertions is developed in each case in connexion with fractures and with tenotomy. The lymphatics are figured and described for the first time in English after the splendid researches of Mascagni. Not any department of anatomy and its relations is left untouched.

Works like the present, however, are not without their drawbacks of usefulness and value. They are but too apt to be regarded most improperly by the student as the only means of conveying to him that knowledge which will enable him to practise his profession with advantage to himself and to his patients. If they be so misused, they may be the means of inflicting serious injury. No book, however ably written and accurately illustrated, can ever enable the student to dispense with the necessity of the actual dissection of the human body, and the study of disease at the bedside. It is in the dissecting-room and the wards of the hospital *only* that anatomy and surgery can be practically learnt. The student who trusts solely to books, however excellent they may be, will find himself, in the hour of trial, theoretically learned, but practically inefficient. But as aids to his laborious investigations, when pursued in a proper spirit, works like the one under consideration, are justly entitled to be regarded as of the highest value. The late regulations of our corporate bodies have for their object more practical examinations than heretofore. Works like this of Mr. Gray materially assist the student; they are not intended to dispense with that important and trustworthy knowledge which results from actual dissection and the study of disease at the bedside. On the contrary, this book is intended to cherish and foster a diligent study of the subject, by showing at every step how closely even small details are bound up with the precepts and practice of surgery; while it facilitates the labour by its exact description of the tissues, which at once enables the student to recognize the part exposed. As a full, systematic, and advanced treatise on anatomy, combining the various merits of the volumes of many countries, scientifically excellent, and adapted to all the wants of the student, we are not acquainted with any work in any language which can take equal rank with the one before us.

Conversations on Natural Philosophy, in which the Elements of that Science are familiarly explained and adapted to the Comprehension of Young Persons. By Mrs. Marcet. Illustrated with plates. Thirteenth Edition. Fcap. 8vo. pp. 504. London: Longman and Co.

Few writers have succeeded so completely as Mrs. Marcet in conveying to the general reader scientific truths in a simple and pleasing style. This edition differs from former ones in the introduction into its pages of the chapters on Heat and Electricity, which formed a portion of the authoress's "Conversations on Chemistry." The work has thus been rendered more complete, and, consequently, more valuable. The text has been carefully revised throughout, and as many additions have been made on the subject of electricity, this portion of the work may be regarded as altogether new. The great merit of Mrs. Marcet's production is its applicability as a volume of study to all persons who may seek to obtain a knowledge of natural philosophy conveyed to them in a most fascinating manner.

The Aquarian Naturalist: a Manual for the Sea-side. By Thomas Rymer Jones, F.R.S. Fcap. 8vo. pp. 524. London: Van Voorst.

At a time like the present, when the aquarium forms an article of furniture in a vast number of drawing-rooms in this country, the appearance of a work like the present will be hailed with much satisfaction by a great number of persons, particularly ladies. The object of the author is thus expressed in his preface:—

> "We have collected the principal facts connected with the ascertained habits and economy of various races of animals inhabiting our own shores, with a view of directing the attention of the amateur naturalist to subjects most likely to afford materials for useful and instructive observation, and, likewise in the hope of supplying the student of Nature with a manual sufficiently comprehensive to serve as the basis and foundation of more elaborate research. In the treatment of our subject, we have sought, as far as possible, to steer a middle course between the two extremes of mere elementary shallowness on the one hand, and scientific technicality on the other; omitting, it is hoped, little that will be deemed of importance by the general reader, and, at the same time, studiously avoiding such details as might be unintelligible, except to the initiated."

In the objects thus stated, the author has admirably succeeded. A number of well-executed coloured plates not only add to the beauty of the volume, but afford a material aid to the reader.

Du Typhus de l'Armée d'Orient. Par le Docteur Felix Jacquot, Médecin-Major de Première Classe, ex Médecin des Hôpitaux d'Algerie et de Rome, &c. Paris, 1858. pp. 440. Victor Masson.

Both in the Crimea and at Constantinople the French and English armies were attacked by, and suffered very severely from, fevers of almost all kinds. Typhus, typhoid, relapsing, remittent and intermittent fevers, were met with. But of these several affections it was *typhus* that played such fearful havock with the French, and *typhoid* with ourselves. Amongst the Russians, typhus, it is known, raged most destructively, as it did in the English army before 1855. In the Crimea, two epidemics of typhus broke out amongst our allies. The first made its appearance with the intense cold of December, 1854; the second with that of December, 1855. The disease in each instance was exported to distant hospitals a month after each outbreak of it in the Crimea. It extended to all the French hospitals, and did not spare our own at Scutari in the first instance, which it did in the second outbreak, when all the French hospitals were fearfully decimated. It was carried beyond Constantinople to Gallipoli and Nagara on the Dardanelles. The transport vessels were attacked, and the disease appeared imported at the hospitals of Marseilles, Toulon, Porguerolles, du Frioul, d'Avignon, de Val de Grâce, in Paris, and isolated cases occurred at Chalon sur Saône, Neufchateau, &c. The mortality at Constantinople was 50 per cent. of those affected, and there and in the Crimea together more than 6000 soldiers of the French army fell victims to this single complaint.

The purport of M. Jacquot's work is mainly to show that this fever, from which the French army suffered so severely, was really typhus, and not typhoid, nor anything else. Several other important points are discussed, all tending, however, to prove the doctrine now so generally admitted in England, that typhus and typhoid must be regarded as different diseases. M. Jacquot considers his subject under three heads: 1. Variability of the Forms and Characters of Typhus. 2. History and Description of the Epidemics occurring in the Army of the East. 3. Variability of the Forms and Characters of the Typhus of the Army of the East in respect to Season, Locality, &c. M. Jacquot's treatise forms a very satisfactory contribution to the history of a most important malady, and is well worthy the attention of such, in particular, as are interested in the debateable pathology of typhus and typhoid fevers.

We deeply regret to have to add, that the talented author was taken by death from his family, his friends, and from science, immediately after he had prepared his manuscript for the press.

The New Medical Act, with Explanatory Notes for the Guidance of the Medical Practitioner and Student. By R. M. Glover, M.D., F.R.S.E., L.R.C.P.; and J. B. Davidson, M.A., of Lincoln's-inn, Barrister-at-law. pp. 64. London: Henry Renshaw.

This is a very able and lucid exposition of the New Medical Act.

On the Juvantia and Lædentia in Diabetes. By John M. Camplin, M.D., F.L.S. London: Churchill.

In January, 1855, Dr. Camplin communicated to the Royal Medical and Chirurgical Society of London, a paper, "On Diabetes," under the above title, and which was subsequently published in the Society's "Transactions." Dr. Camplin's present work consists of a reprint of the memoir in question, together with much additional matter in relation to diabetes. The author's attention was specially directed to the study of diabetes, in consequence of his having himself been the subject of that formidable disease. This led him to study its treatment, and particularly to watch the effects of diet. One important feature in his treatment is to remove, as much as possible, from the diet articles containing considerable quantities of starch, as bread and potatoes, and to substitute his bran cake in place of bread. The effect of this change, combined with general care in diet, and the exhibition of suitable medicines, has been to effect a cure in his own and many other cases.

Dr. Camplin refers incidentally to cases of diuresis and diabetes insipidus: these cases are still involved in much obscurity. We believe with Dr. Hassall that many cases of diuresis are really cases of insipident diabetes, in which sugar is present in small amount, but in which it is not detected according to the old and usual methods of analysis pursued. It is singular that scarcely any of our writers on urinary diseases, with the exception of Dr. Hassall, treat of diabetes, except in its confirmed and fully-developed form, in which the urine has acquired a very high specific gravity, 1040 or thereabouts. Now diabetes may exist for a very long period before sugar is formed to this extent, and it is at this period that the disease most readily yields to treatment.

Dr. Camplin's work is eminently practical; the instructions on diet possess much value, and the work should be consulted by every practitioner who has cases of diabetes to treat.

The British Army in India: its Preservation by an Appropriate Clothing, Housing, Locating, Recreative Employment, and Hopeful Encouragement of the Troops. With an Appendix on India, &c. By Julius Jeffreys, F.R.S., formerly Staff-Surgeon of Cawnpore and Civil Surgeon of Futtehgurh. pp. 398. London: Longman.

Mr. Jeffreys, well known from his mechanical abilities and inventions, has here fully entered into the subjects of the construction and manufacture of head and body dresses for our soldiers in India. He bases his practice upon scientific demonstrations, and his views will be well worthy the attention of the medical department of the new Council for India. Mr. Jeffreys dedicates his book to Mr. Ranald Martin, of whom he says—

> "Having propounded more *advanced* views on tropical pathology, you have established them by the surest means,—an extensively-successful practice; and you have shown during the many years since your return to Europe that professional talent and benevolence are not limited in their sphere to one clime alone, but are general in their efficiency and action....For more general information of a sanitary character relating to the army, the reader is referred to the labours of the various military medical officers who have written on the subject; more especially to those of Mr. Martin connected with India, in which it is difficult whether to admire most the judgment or the energy displayed. Such, likewise, would appear to be the character of the 'Report of the Army Sanitary Commission,' of which he, with others of distinguished ability, is a member."—p. ix.

We can strongly recommend the perusal of Mr. Jeffrey's work to all our readers, and most especially to officers of the Indian medical service.

Hygiene or Health as depending upon the Conditions of the Atmosphere, Foods, and Drinks, &c. By James H. Pickford, M. D. London: Churchill.

Sanitary reform is just now so anxiously discussed, and measures of public and private hygiene have been made so prominently the subjects of debate and deliberation, that Dr. Pickford's publication must be considered very well timed. His scheme is very comprehensive. The present volume treats of the physics of the atmosphere, the seasons, temperature, rain, winds, and pressure; the respiration of plants and animals, the circulation of the blood, the chemistry of respiration and animal heat; infection, contagion, malaria, sewerage, drainage, ventilation, and climate in connexion with disease. A second and third part are intended to follow. The second part will include digestion, foods, and drinks, their impurities and adulterations. The third and last part will include motion and rest, sleep and wakefulness, secretions, excretions and retentions, mental emotions, clothing, bathing, &c. The present volume is filled with condensed information on the subjects of which it treats. The reader suffers only from a want of connexion between the paragraphs, which give to the book the aspect of a "collection" on the subjects of which it treats, rather than of a finished literary composition. This very defect is coupled, however, with the attendant advantage that the disjointed facts so communicated are separately numbered in short paragraphs, and thus reference is facilitated. This part is copious and accurate. The last additions to our knowledge in physical science have been carefully collated, and are enunciated in clear language. Those who are interested in hygiene, and who are not sufficiently skilled in the French language to consult the admirable treatises which it contains, will do well to possess themselves of this manual, as the best which we possess in our own tongue.

The Journal of Psychological Medicine and Mental Pathology. Edited by Forbes Winslow, M.D., D.C.L., &c. New Series, No. XI. July, 1858. London: Churchill.

The present number of our intelligent and interesting contemporary contains, amongst other subjects, the following articles, viz: "On the Causes of Idiocy," "On Suicide," "On the Paralysis of the Insane," &c.

Edinburgh Veterinary Review, and Annals of Comparative Pathology. Published Quarterly. No. I. July, 1858. Edinburgh: Sutherland & Knox.

We greatly regret that this the first number of a new and able serial should have yet, in one point, evinced such bad taste and ill-feeling on the part of its conductors in being made the means of an attack upon the able author of a recent tract upon the "Evil results of Over-feeding Cattle." The offence on the part of the latter gentleman evidently is, that he, not being a veterinary surgeon, has chosen to teach veterinary practitioners.

AMPUTATION OF THE NECK OF THE UTERUS, INSTEAD OF REDUCTION AND THE USE OF PESSARIES.

M. Huguier, surgeon to the Beaujon Hospital in Paris, has lately published, in the *Gazette Hebdomadaire*, a paper with the following title: "Remarks on the Hypertrophic Lengthening of the Uterus, and especially of its Neck, in the Affection improperly called Prolapsus and Procidentia of the Womb; and on the Treatment of that Hypertrophic Lengthening by means of the Amputation of the Neck of the Uterus, or the Inferior Portion of the whole organ, according to the degree of the affection."

M. Huguier thinks that he is the first surgeon who ventured upon this operation, his series of amputations having commenced about nine years ago. He considers that the pathological state designated by the name of Prolapsus is not the result of a displacement of the uterus, but of a general or partial lengthening of the organ. The partial lengthening affects the portion of the neck situated below the insertion of the vagina into the cervix; the general, affects the whole womb, or at least the whole neck both within and above the vagina. In neither case is the *body* of the uterus below its normal situation, but is, on the contrary, drawn up the pelvis, and even into the abdomen.

Up to the present period, M. Huguier has operated upon thirteen patients; but we do not find in the author's article satisfactory details respecting the result of all these operations, his object evidently being to set matters right regarding the question of priority. M. Huguier was induced to put forth this claim in consequence of a paper by M. Mayer, a German surgeon, who lately performed the operation, and looked upon himself as the pioneer of these decollations.

Abstracts

OF THE

INTRODUCTORY LECTURES

DELIVERED AT THE

VARIOUS MEDICAL SCHOOLS OF LONDON,

At the Opening of the Session 1858–9.

ST. BARTHOLOMEW'S HOSPITAL.

INTRODUCTORY ADDRESS BY MR. HOLMES COOTE.

The introductory lecture to the Medical Session was delivered in the theatre of this institution last Monday evening by Mr. Holmes Coote, before a numerous audience, amongst whom we observed Sir George Carroll; the President and Registrar of the Royal College of Physicians; the Treasurer, and the medical and surgical staff of the hospital.

The lecturer commenced by welcoming those gentlemen who were about to commence, as well as those who were to resume, their professional studies within the walls of that hospital, which was connected with so many interesting historical recollections. For (continued the lecturer) we stand upon no common spot. There was a time, indeed, ere civilization first flowed to these shores in the shape of Roman legions, when Smithfield was but a grassy mound occupied by a few huts, and surrounded by a boundless forest. But at a very early period, even under Saxon rule, it became the selected abode of those religious foundations to whose fostering care was entrusted, during the periods of turbulence, all that remained of arts, of literature, and of science. He passed an eloquent elogium on Rahere, the founder of the institution, whom he described as being a pleasant witty gentleman, sometimes miscalled a jester or minstrel to Henry I., a sort of Richard B. Sheridan of his day, one admirably calculated by his ready wit to amuse a court, and who conceived the idea of founding a priory, Smithfield being chosen for its site. After alluding to the curriculum of the examining bodies, the prize system, and the Christmas vacation, the lecturer spoke of those gentlemen who had been educated at St. Bartholomew's, and who had distinguished themselves in the public service, particularly Mr. Bostock, who after leaving the hospital entered as surgeon in the Scots Fusilier Guards, and was engaged with his regiment in deadly conflict with the Sikhs. After returning home from India he was appointed to one of her Majesty's regiments of Foot Guards, and he again left England with his regiment and encamped in the pestilential plains of Bulgaria, and by his skill, energy, and example, supported his ailing comrades. He was also present in the Crimea, and witnessed the ever-memorable battles of the Alma and Inkermann, and once more returned to England, with shattered health, but with a breast covered with decorations worthily gained in the field. Mr. Coote concluded a lecture which had been listened to throughout with the greatest attention, and which was constantly interrupted by vociferous cheering, by stating that a good surgeon should have a sound preliminary education, a cultivated mind, free from prejudice, should have a knowledge of the dead languages, and be familiar with those of France, Germany, and Italy; and, he continued, "let me recommend you to follow in the path of Percival Pott, rather than in that of John Abernethy; or if I were to select a living example, I would point you to William Lawrence."

CHARING-CROSS HOSPITAL.

MR. BARWELL'S INTRODUCTORY LECTURE.

The lecturer explained the difference between the university student who goes up to college to complete studies which he has commenced at school, and the medical student, who, on entering at the hospital, has generally left behind him the restraint of boyhood, who has to enter upon quite new studies, and in about three years to carry them so far as to make him a junior practitioner of the most difficult art that falls to the lot of man to practise. In a medical school, and in three years, the rudiments only of the science can be taught; the rest, and its application, might be learned upon battle-fields or upon deserts, within the tropics or at the poles; for Englishmen travel everywhere, and wherever they go there are found the medical fraternity labouring amongst the helpless and the poor, and carrying civilization and the practical Christianity of good deeds amongst savages and outcasts. Into the doctor's hands man falls at the moment of his birth; from his hands he falls to death. Throughout his earthly course he is obliged to trust his life, his health, perhaps his very honour, to the doctor's care; how carefully, then, should each medical aspirant educate himself for so responsible a career!—responsible and difficult wherever practised; for whether in towns or villages, amongst rich or poor, black, white, or red men, are found only different spheres for exercising the same skill and the same virtues.

In old times the study of medicine was less severe than now, being a mixture of quaint though often practical apothegms from Hippocrates and others, and of judicial astrology and magic. After reading a few quotations from some such authors, the lecturer proceeded to show that about the time of the Reformation, and shortly after, all false sciences began to be taken in labour of true ones. Harvey was the great midwife in the case of Medicine, and by proving the circulation of the blood set up the commencement of true medical knowledge, which is now so vast and complicated as to require the use of all other sciences as ladders whereby to surmount its difficulties. Anatomy, physiology, and chemistry were then alluded to as the tripod whereon medical knowledge stands. The student was recommended to work at them well; in all things to be earnest and steadfast, and to avoid a sauntering and lounging method of losing time. The use of the microscope was also shown to be necessary at the present day. The practice of taking notes of cases in the wards, and of going through each set of diseases thoroughly and accurately was particularly insisted upon.

The lecturer having thus shown how to acquire the skill which he said the medical man must exercise, next spoke of his virtues and their attainment. The mission of the profession being to relieve suffering whenever called upon, its votaries must be always ready to give up their enjoyment or repose at the desire of all sufferers, whether poor or rich. He has not two qualities of advice—one good for the rich, another less good for the poor; but gives to any who are sick the most precious of his time, and the best results of his studies. Often without remuneration, or even hope of it, he toils either for private poverty or for his country's good. The virtues above all other, that such a man must possess, are self-denial and self-devotion, not only to carry him through the slights and crosses in his career, but also to render him above all and every sort of temptation, that he may always be the perfectly reliable repository of personal or family honour:—"This reliability is of all parts of the medical man's character the most essential. No talent, no skill, no genius, even, can make up for its absence; and though I would willingly have you fail, gentlemen, in no part of your profession, yet would I rather see you make an obvious blunder in diagnosis or treatment every month in the year, than once in the whole course of your lives fail in professional honour and integrity. The qualities which support the medical moral character are not by nature strong enough to keep it uninjured through all its trials. As you now begin your intellectual, begin also your moral training. You will find London full of temptations. Means of amusement swarm around you; some vicious, some only evil if they occupy too much of your thoughts and time. You may play a game of billiards, or take a row on the river now and then with advantage, or you may become amateur markers or bargemen. You may take healthful exercise in the streets, or turn your walks into seasons of debauchery. A man may well resist evil without dulness of wit and a lugubrious aspect. Enjoy your youth wisely, and do not close the sporting-door of your heart against mirth and good-fellowship in their season. I am no advocate for sombre thoughts and a disfigured countenance; but I am a zealous one for that sort of life that shall render you strong in the way I have mentioned, which shall make you *gentlemen*, not merely in manner and position, but in upright truthfulness of heart—in that charity which desires to injure the feelings of no one, however poor and lowly, and in that virtue which shall make sacred any fault or any innocence that may be entrusted to your keeping."

ST. GEORGE'S HOSPITAL.

INTRODUCTORY ADDRESS BY DR. BARCLAY.

DR. BARCLAY began with a few words of welcome to those assembled on the occasion, apologising for his own inexperience as a lecturer, and claiming for the custom the advantage of its offering an opportunity on which friends could meet, and wish each other happiness and prosperity, while it served the purpose, with those more immediately engaged in the business of the session, of a prompter's bell, to announce the rising of the curtain and the commencement of the drama; and, with such an object in view, he regarded its very insignificance as its chief merit.

He called on the younger part of his audience to consider seriously what was comprehended in the employment of the word study—abstraction of thought, concentration of ideas, earnestness of purpose, industry, energy, determination; and while urging them to bring these necessary requisites to the task on which they were entering, he reminded them that they could not really study medicine in the time allotted for their curriculum; they were only now to learn the grammar and vocabulary of that new language in which the thoughts of their after life were to be clothed.

The study of medicine he defined as the investigation of the behaviour of each separate molecule of which the body is composed, under every possible circumstance in which, during life, it can be placed; illustrating this definition by the changes going on in the necessary processes of thought and attention in which they were then engaged. He expressed his belief that all the arrangements of matter, all the structures of the body, all the changes it undergoes, were originally constituted in subservience to this, the highest function of man's being; and pointed out how these molecules of matter became incorporated into the "Ego" which throughout its existence remains one, unchangeable, indivisible—that sentient being who feels his own identity, whose sentiments and affections, whose limbs and organs, are verily and indeed his, a part of his being,—although not an atom of that matter which gave expression to the one or form to the other a few years ago now remains in his body.

He next proceeded to advert to the necessity for acquiring a knowledge of facts as the only basis for philosophical reasoning on these higher parts of the study of medicine, and reminded his hearers that their express duty now was to acquire a knowledge of facts, warning them against wasting time which ought to be appropriated to this purpose, in following out inquiries which, in their proper place, and at their right time, might be the most certain to lead them to a better knowledge of their profession.

A considerable portion of the lecture was occupied in attempting to illustrate what was meant by a fact, and in what the fallacy of facts consisted. The lecturer endeavoured to show that as any atom of matter, standing alone in infinite space, having no sensible qualities and affecting no other atom of matter, was not a fact, so the very term "fact" implied of necessity a relation past or present between two or more substances; and it was impossible to represent any occurrence in nature in language which did not imply the existence of such relations. He reminded them that before Newton solved his problem, why the apple fell to the ground, no one knew that the moon gravitated to the earth by the same force which caused the apple to fall; and that the fact that the moon did not fall, would have been set against the assertion that she does gravitate; and it would have been alleged that as the one was true, the other must be false: whereas the falsehood lay only in the misinterpretation of the relation between these bodies. He also attempted to show the difference between the acknowledged relations constituting the fact, and the explanation of such relations constituting the theory, by reference to the phenomena of sound and the hypothesis of an undulatory movement in the air, which, though carrying with it all the probability of truth, might yet be wholly overturned without altering the facts. He apologized for insisting on these somewhat obscure points, on the ground that the progress of medical science was so much hindered by the absolute ignorance of too many medical thinkers and writers with respect to the right principles of reasoning; urging his hearers to lose no opportunity of making themselves acquainted with the subject. He put to them as a test of their acquaintance with the method of reasoning by induction, whether they could answer the question, why hundreds of instances of any disease (say pneumonia) which had recovered after the administration of any particular remedy (say calomel), afforded no proof whatever that that remedy had any power to cure the disease, and only suggested the barest probability that it had any beneficial influence whatever.

Dr. Barclay then endeavoured to show them how they were to proceed in the acquisition of the knowledge of facts, which was their present business, advising them rather to exercise their minds in the study of the phenomena of disease than in the complex problem of the effect of remedies; recommending them to take upon trust the teaching of the physicians and surgeons of the hospital as to the powers of drugs in the cure of disease, and when they had done this well they would be best prepared to unravel these mysteries when they began to think and study for themselves, after they had said farewell to their present instructors. He touched very lightly on the relative duties of their subsequent career as practitioners of medicine; but took the opportunity of reminding them that they, no less that their patients, bore within their breasts the germs of an immortal life. He called on them to allow this feeling; to measure the estimate which they formed of the pleasures and trials of a day; to act now as they knew they must wish they had done when, after the lapse of centuries, in another state of existence, would rise up before them, in the long vista of the past, the vivid recollection of these their early years of life. And again, urging them to be honest, industrious, and conscientious, he invited them to the friendship of their teachers, the companionship of their fellows, and bid them heartily God-speed in setting out on their journey of life.

GROSVENOR-PLACE SCHOOL OF MEDICINE.

DR. THUDICHUM'S INTRODUCTORY LECTURE.

The theatre was well filled, and the lecturer kept the audience in attentive good humour throughout. Dr. Thudichum took up the subject of method in the study of medicine as his theme. He dwelt on the study of anatomy, surgery, physiology, chemistry, forensic medicine, materia medica, and botany. In these descriptions the lecturer introduced stores of kindly and pleasant wit, which kept the "benches in a roar;" but later, as he approached the end, he entered on more serious argument, and eloquently pointed out the difficulties in the way of the student: the mode in which these are to be met; the realities of true science, and the necessity of duly exercising probity and honour in the professional strife. As the lecturer concluded, the enthusiasm of the audience was loudly evinced, and long continued.

GUY'S HOSPITAL.

INTRODUCTORY ADDRESS BY MR. TURNER, TREASURER TO THE HOSPITAL.

The lecturer stated that he addressed the students as the representative of the hospital authorities, under whose superintendence and direction the school necessarily falls. After making some general observations, he remarked that the governors were not insensible to the reciprocal advantages which the patients derive from the presence of the students amongst them; not only through the direct aid afforded by such of the pupils as are actually engaged in their relief, but also through the watchfulness and intelligence of those who are simply employed in examining their symptoms and observing their progress. Nor were they indifferent to the lustre derived by the hospital from the distinction and reputation of its students. On the subject of the lectures, he enjoined the students to consider their teachers as their friends, and to apply to them at all times for the solution of difficulties which might present themselves in the course of their studies. He dwelt upon the necessity of carrying the knowledge obtained at the lectures to the dissecting-room and the wards, so as thoroughly to qualify themselves for the management of their fellow-creatures. He guarded them against devoting their attention to the most aggravated cases in the wards, to the neglect of simple accidents and disorders. On the subject of instruction, there could be little doubt, the lecturer thought, that oral instruction was more important than that gleaned from books, because the information was gained fresh, the benefit of the very last discovery and the results of the most recent investigations were obtained, and the living book (as the lecturer may be called) can both question and be questioned by his pupils. The advantages of the lecture-room were most fully gone into and considered. On the subject of their studies, and the spirit in which they should be pursued, much importance was attached by Mr. Turner to anatomy. This was the foundation of the knowledge of the human frame, and too much labor could not be bestowed in acquiring a knowledge of this branch, not with the aid of the knife alone, but also with the aid of chemical science; for when the knife and the scalpel have completed their share of the investigation, the laboratory of the chemist, carries on and completes the work. The human body is, in fact, packed in every part with chemical laboratories; its whole life, whether in health or disease, is a series of chemical processes; and it is by the light of chemistry alone that the pupil can hope to understand the functions or nature of either, to deal with them aright, or, if he mistook not, to make any material advance in medical science.

Mr. Turner recommended his hearers to join the Physical Society of Guy's Hospital, which would greatly help towards attaining precision and accuracy of ideas, on which he had descanted at some length; and he enjoined upon them the necessity of avoiding extravagance, and of regulating their expenditure so as not to exceed their resources. Mr. Turner then considered the vocation of the physician, as contrasted with that of the advocate and the divine, and felicitously showed there could be no more noble study, none more elevating to the understanding, nor better fitted to refine and purify the heart, than the investigation of the works of Him who has stamped the whole creation with the impress of his power, his wisdom, and his love. He showed also that the medical man was not simply an explorer of truth, but a dispenser of its benefits; that it is his occupation to apply his knowledge to the service of his fellow-creatures, and that in his daily walk he is following the footsteps of our blessed Saviour, who himself selected the cure of man's bodily diseases and infirmities as his credentials in that wonderful mission of mercy, for the accomplishment of which he exchanged the glories of heaven for the contempt and hatred of an ungrateful world.

After alluding to the advantages and disadvantages of the medical profession as a means of livelihood, the lecturer concluded with some observations on the final purposes for which life is given to us all. He entreated his hearers to be constantly on their guard, to have always before them the end of their being, and, above all, to seek earnestly the aid of that Spirit, through whose assistance alone the corrupt propensities of our nature can be withstood and subdued.

KING'S COLLEGE.

PROFESSOR BLOXAM'S INTRODUCTORY LECTURE.

After adverting to the improvement which has taken place in the general education of the medical student as well as in the substitution of the habits and manners of the gentleman for those of the conventional type, the lecturer proceeded to offer some friendly remarks on the course of education they were about to commence. In discussing the different modes of imparting instruction, he drew a parallel between that derived from attendance on lectures as compared with the results of reading only, and whilst far from undervaluing the latter, he was desirous it should be used as an auxiliary to the former. "The great advantage of teaching by lectures resides in the opportunity which it gives to the teacher of bringing his propositions before the student with greater force and distinctness than can be attained, without tedious circumlocution, in writing. In the ordinary affairs of every-day life, we all acknowledge the advantage of a personal interview over a written communication, when we desire to elucidate some complicated business. The expression, intonation, and action of a speaker often enable us to understand, in an instant, an explanation which we might have read again and again with the sole effect of increasing perplexity." The Professor advocated the practice of taking down merely the heads of lectures in the note-book, and this most especially in the sciences which were more essentially demonstrative; and stated that this practice "enabled the student to prevent that occasional wandering of the thoughts over which the most conscientious auditor has no control."

At the present time, owing to the recent changes in the curricula, it was of the highest importance that that well-known and "melancholy" habit of postponing all serious application till the third and last year of the curriculum should be abandoned. He believed that the misspent time of the first and second years cannot be redeemed by a system of cramming, inasmuch as the recent changes at examination in introducing practical demonstration on the subject will necessarily neutralize the anatomical information which has merely been acquired by the exercise of an acute memory. By earnest study in the dissecting-room, and in the wards of the hospital, they would be prepared to meet these new and important requirements of the time.

"When we regard the immense and daily increasing importance of the sciences which are essential though collateral branches of a medical education, it must be obvious that their number and extent is so great that they cannot possibly take a firm root in the mind during the short period of three years. It would be, therefore, clearly of incalculable advantage if the early education were so directed that the elements of sciences, such as botany and pure chemistry, were more generally taught as a part of ordinary education, and that, as far as could be ascertained, the training of a boy should have some relation to his future pursuits. Could this be carried out, the pupil would at an early age, when most minds are in a highly inquisitive state, be imbued with a large amount of most serviceable knowledge, and fitted for the reception and appreciation of the value of the sciences more purely medical."

In speaking of that department which it was his more immediate province to teach in King's College School, the professor proceeded to say:—"If chemistry owes much to medicine, she is now in a position to repay the debt with interest, and the medical man avails himself of her aid at every step of his practice. By acquainting him with the composition of different varieties of food, and of the excretions from the body, chemistry enables him to draw the most important inferences as to the true nature of that very complex alternation of destruction and reparation which we understand by the term life. By a chemical analysis of the secretions, the proximate causes of certain forms of disease are pointed out; and although it must be confessed that we are yet far from possessing so perfect a knowledge of the chemical changes taking place within the body as to enable us at once to point out, upon chemical principles, the appropriate treatment, enough has been learnt to prove that we are in the right path, and to encourage the physiologist to pursue his researches by the light afforded him by the chemist, in the hope of ultimately resolving into scientific principles the rules laid down by experience, and of thus completing the elevation of the art of healing and the dignity of the science of medicine."

After pointing out the completeness of the means at the disposal of the student for the acquisition of sound professional knowledge, in the arrangements of this school, and of the excellent hospital in connexion with it, the lecturer concluded an address, of which our limits permit us to give but an imperfect sketch, by "alluding to a circumstance which has afforded the greatest satisfaction to all connected with King's College—I mean the high position which was taken by our students at the recent examination for the degree of Bachelor of Medicine at the University of London. On that occasion there were twenty-eight successful applications for honours, and no fewer than ten of these were made by gentlemen who had received their medical education in this college. Out of six gold medals in the different branches of studies, four were carried off by King's College students; and whilst sincerely congratulating the general body of students on having been so well represented at this examination, I earnestly entreat them to let this day inaugurate such a course of study as may enable them to earn similar laurels, and thus still to augment the *prestige* which attaches to the title of a student of King's College."

The lecture, which was received with great attention throughout, and with many marks of approbation, was followed by a dinner, given by the principal and professors of the College, in the hall, at which a large number of visitors and associates enjoyed a most agreeable evening.

LONDON HOSPITAL.

INTRODUCTORY ADDRESS, BY DR. GIBBON.

The lecturer commenced by alluding to the fact, that in being deputed to deliver the Introductory Lecture, he was, in fact, commissioned to inagurate an important alteration made by the examining bodies in the curriculum of medical education. The diminution in the attendance on lectures generally he considered a great boon to students, but in the case of physiology, it was a question whether they would not benefit by a more prolonged attendance than is now required, since this subject seemed to be peculiarly fitted for oral instruction.

The lecturer tendered the thanks of himself and his colleagues to the authorites of the London Hospital for the attention they were continually bestowing upon the school, and for the admirable means of practical instruction in the wards, which they had thrown open to students. He more particularly referred to a recent alteration in the terms of the appointment of a resident medical officer, whereby many more students would be enabled to reap the advantages of this most valuable office. While alluding to the various house appointments, the lecturer forcibly admonished those students appearing for the first time to make it their most anxious care to obtain for themselves at least *one* of those appointments. It might also, he thought, be found advantageous to hold a clinical office in the medical wards before assuming the important duties of dresser to the surgical patients.

In conclusion, Dr. Gibbon strongly advised all, both those entering upon, and those already engaged in, their professional studies, to give themselves up most carefully to the *observation* of disease, and not to allow themselves to be led, by a glittering offer of prizes, from that important study of disease, the opportunities for which would only be afforded them during their studentship.

ST. MARY'S HOSPITAL.

DR. SIBSON'S INTRODUCTORY LECTURE.

Dr. Sibson availed himself of the new regulations of the College and Hall, which appoint a practical examination at the end of the second, and another at the end of the third year, to urge upon the student the necessity of working closely in the laboratory, the dissecting-room, and the wards, especially the medical wards. While he is acquiring the various elementary sciences, he ought never, even from the first, to lose sight of what will be of use to him afterwards in practice. The use of the microscope in examining healthy and morbid structures and fluids has, more than anything else, led to the recent advances in our knowledge of disease. Surgical anatomy has had an especial influence on the improvement of surgery and medical anatomy, and is exercising a similar influence on the advance of medical diagnosis. An exact knowledge of the relative position of the internal organs, and of the effect of disease upon their situation, as well as of respiration and digestion, is needful in the practice of auscultation, percussion, and the other helps to physical diagnosis. Without that knowledge the diagnosis is confused and obscure; with it, precise and clear.

The main object of the address was to induce the student to spend the greater part of his time, during the third year especially, in the medical wards. The present movement on the part of the Court of Examiners will inevitably and speedily lead to the bedside test of the practical knowledge of the candidate. They will require him to make out and record actual cases in the wards, and give the diagnosis and treatment. Thus only can they satisfy themselves as to the fitness of the candidate to practise our profession. By far the larger proportion of cases of internal disease, are simple in their nature, easy of diagnosis, and tend strongly to recovery. Such cases may be made out easily, and with but little attendance in the wards; it is not so with the more important but less frequent class of cases, which present difficulties in diagnosis that are always great and sometimes insuperable. These difficulties may arise from the constant and remarkable variety presented by the same disease in different cases. This applies not only to those cases which are chiefly recognised by the general symptoms, but to those also which are made out by the physical signs—or from the complications which so frequently obscure the more important disease, which often goes overlooked, when the minor ailment caused by the major is erroneously put down as the sole malady. This great source of difficulty applies with even greater force to cases of physical diagnosis. Again, it is often extremely difficult to mark the stage of the disease at the time it is first seen, yet unless this be done, a case that is of itself rapidly recovering, may be injured by ill-timed and therefore misdirected treatment. The last important difficulty alluded to was the remarkable number of different, often opposite diseases, in which the same symptom is the most prominent feature; thus sickness may be due to stomach affection, to injuries or diseases of the abdominal organs and lower limbs, and to the several often fatal affections of the brain and spinal marrow.

After urging on the students the close study of disease in the wards, the lecturer concluded the address by impressing upon them, that while the necessity for an income, the approval of others, the love of fame, the desire to do good, a strong sense of duty and a high feeling of honour, are all of them proper, some of them high, motives to action, the highest incentive of all is the love of our profession. "With that as your leading motive, and the others as your incentives, your practical sense will be quickened; you will bring to bear your best faculties with continuous force upon each patient, and you will unravel and bring to a successful issue many a case that would otherwise be obscured by almost insuperable difficulties."

MIDDLESEX HOSPITAL.

MR. BENTLEY'S ADDRESS.

The introductory lecture was delivered by Mr. Bentley, Professor of Botany, to a very full theatre of auditors. The lecturer spoke of the first of October as the great day of the year for the medical profession, and then of the special interest which it had for students, practitioners, and teachers. He remarked that some years ago the profession was believed to be overstocked, but he could not regard such as any longer the case, seeing the number of students that now flocked to the medical schools, and considering that many new appointments had been created, as medical officers of health, &c.; and also that the East India Company had opened the door to an accession of its medical *employés*, granting appointments merely for the amount of medical science possessed, and not simply on the nomination of directors. This arrangement was criticised by the lecturer, who believed that disappointment had ensued from the class of men who have recently entered that service, not being up to the average standard of merit in certain particulars. He believed that this would be but temporary; still he thought it would have been better that only half of the East India medical appointments should be conferred for proficiency in medical science as proved by competition, and that the other half should be secured to those connected by association with the directors and Indian interests. He alluded to the great event of the past session of Parliament affecting the medical body, the achievement of an Act of Medical Reform; and canvassed the recent alterations in the regulations of the examining boards. In this part of his discourse, the lecturer announced what he considered would have been improvements in these regulations: advocating the abolition of apprenticeship by the Society of Apothecaries; also that medical practitioners should not dispense their own medicines, but leave this duty to the licentiates of the Pharmaceutical Society, or other druggists. He also gave his ideas of a model medical curriculum. He praised the division of the general examination into two parts, and the rendering compulsory a preliminary examination to test the knowledge of candidates for the profession in general branches of science; and he recommended the students who felt their general knowledge deficient to lose no time in endeavoring to repair the deficiency, even whilst pursuing their medical studies. [This recommendation was diametrically opposite to one which we recollect hearing in a splendid oration at St. Bartholomew's Hospital, a few years since, from Mr. Paget, who, as we think, wisely advised students, if their general education were insufficient, to be content for the time with what they had, for that their whole attention ought then for some years to be absorbed in their professional pursuits. However, *quot homines tot sententiæ.*] The students must, we conceive, have been quite overwhelmed with the number of studies amongst which, according to their lecturer, they ought to divide their attention, turning afterwards to botany as a recreation. The latter half of the lecture was occupied with a panegyric on that science, not only as one of the most useful and agreeable allied to medicine, but also as calculated to promote health, and in a high degree, by fostering close observation and discrimination, to discipline the mind for studies more strictly medical.

The assemblage, at the termination of the lecture, met by invitation in the board-room of the hospital, where a *conversazione* was held, invigorated by corporeal refreshments.

ST. THOMAS'S HOSPITAL.

INTRODUCTORY LECTURE BY DR. BRISTOWE.

After a few introductory remarks, the lecturer addressed himself to those who were about to enter on their hospital career. He recommended them, ere they plunged into the new life that was before them, to pause a little, and consider what they had gained in that which they had already passed through. He reminded them that they had acquired a considerable amount of elementary knowledge, they had made some progress in literature and science, and, above all, had been well grounded in the principles of morality and religion. He urged them to preserve all those lessons of knowledge and of good, to the acquisition of which their previous life had been devoted, and not to throw them aside as useless lumber, for they would find them useful.

Dr. Bristowe then passed on to the consideration of the future. He began by recommending them to be careful in the choice of companions, and pointed out that the chief danger arose, not so much from positively vicious companions, as from those who were unsuitable—from those, on the one hand, who were idle and careless, and from those, on the other, who had money at their command, and who, though innocent themselves, led by example those with less means into thoughtless and criminal expenditure. He urged them, therefore, to reserve their friendships, for that in good time they would find themselves, without any effort of their own, drawn into the society of those whom community of thought and interest was guiding along the same road as themselves, and whose companionship would be advantageous to them. The lecturer next proceeded to explain that medical knowledge was to be acquired by three separate, yet mutually illustrative means—by lectures, reading, and attendance in the wards and other practical departments of the hospital. He observed that it was a common remark that students were over-lectured, to which remark he gave a qualified assent. Believing that students were really required to attend too many lectures, he yet thought that they were by no means out of proportion to the subjects which had to be learnt, but that the subjects themselves were too numerous and too extensive for the limited time allotted to their acquisition. He advised them strongly, however, to be constant and attentive at lectures, and to store up everything there explained; for, regarding every branch of knowledge as an unknown wilderness to those who were entering on it for the first time, he characterized lectures as guides which conduct them safely through, pointing out the objects of interest, and leaving them masters of a route whence future investigations might safely diverge.

The lecturer then dwelt on the importance of reading as a means of acquiring knowledge, pointing out that lectures and reading were, after all, merely accessory to the practical knowledge which was to be acquired in the laboratory, the dissecting-room, the dead-house, and the wards of the hospital, and insisted on the importance of students availing themselves of all the opportunities which were offered them. He went on to show the necessity of acquiring experience, but warned them against misunderstanding the meaning of the word. He characterized experience as the constant prop of false theories and facts, and explained that it is so in daily life, because it is generally founded on facts imperfectly observed, imperfectly remembered, and imperfectly compared by minds already prejudiced. True experience, that which he wished them to strive after, was obtained, not by length of years, but by close, accurate, continued, and recorded observation; he recommended them, therefore, not to be anxious to observe much, but rather to work thoroughly, exhaustively, at a few things. In their intercourse with their teachers they were likely to be influenced to a great extent by them; but while recommending them to learn all they could from them, and to copy as far as possible their good qualities, he warned them against mistaking their peculiarities and faults for excellences. He then advised them to cultivate modesty of demeanour, which he considered to be not only becoming, but, in those who were students, essential. At the same time, he pointed out that humility need not render them mean-spirited or deprive them of that relative self-respect which enabled them to retain their position amongst their neighbours; for that, compared with perfection, others were equally insignificant with themselves.

Dr. Bristowe then proceeded to urge them to contend for the prizes that were offered by the authorities of the medical school. He argued that the prize system was a good one, though liable to abuses; that it was, in fact, a part of that system by which the whole proceedings of mankind were regulated—a system by which the Almighty had rendered this life, not a continuous painful effort with one final reward alone, but a succession of efforts and rewards, culminating in that final one of eternal rest. He urged them, therefore, to contend for the prizes, not making them the exclusive objects of their ambition, but employing the encouragement they offered as an aid and incentive to the performance of their duty. He lastly addressed himself to the students who were about to leave the hospital, and chiefly to those who had contended for the prizes. The lecture was concluded by a few general remarks, which were loudly cheered.

UNIVERSITY COLLEGE.

ORATION BY PROFESSOR WALSHE.

To an audience of between three and four hundred attentive listners, who filled a large portion of the great theatre in this College, Professor Walshe this year delivered an admirable oration in a very graceful and attractive style. His object was the alleged degeneration of the human race from causes dependent on civilization or otherwise; and one inference that he drew from the consideration of the question was, that the medical profession was peculiarly the body to determine the actual state of the case. "Condorcet," he said, "during the fury of the French Revolution, set himself calmly to study the destiny of mankind, and arrived at the conclusion of man's infinite perfectibility." But in the brief space of time that had elapsed since the researches of Condorcet, little had been shown to prove an appreciable advance to that millennium. In intellectual qualities we had apparently not advanced since the times of antiquity; in morals, it was declared that we had retrograded; in physical qualities, that we had deteriorated. Modern French novels revealed what is the picture of society in one of the leading countries of modern times; and from their pages the medical observer could only anticipate the prevalence of nervous effects resulting in insanity, the deterioration of the procreative power in man, and of fecundity in the female. Insanity was found, in fact, to be on the increase, coincident with the fierce conflict of minds entailed by advanced civilization and political changes; and Esquirol, the French Conolly, had declared that he could write the history of the French Revolution, from observing the different phases presented by that disease at different periods of that terrible epoch. Insensate notions had not vanished from men's minds. If a belief in witchcraft was less rife than formerly, except in some very backward districts, the belief in spirit-rapping, table-turning, and the follies of mesmerism, had taken its place, as well as that medical delusion which, in defiance of Euclid, who had said that a part was not equal to the whole, maintained that the decillionth portion of a quantity was more potent than the entire amount. In form and figure the human race was believed to have become degenerated in our day. But the opinion of Robert Knox, who held the contrary, the lecturer considered more worthy of being trusted, and that the fine statues which had come down to us from antiquity were no more than ideal models of beauty; that no one with the fabulous strength of Milo, of Crotona, had existed; and that the English prize-fighter, who would doggedly bear to be pummelled for hours, was probably superior in courage to the ancient gladiator of the Roman circus. The duration of life had increased in modern times so much that, within the last century, the deaths occurring under a year after birth had diminished fifty per cent.; and if the Carlisle tables were to be depended upon, lives which were then worth but eighteen years, had been increased to forty-three years in our day. The lecturer combated the idea of essentially degenerated and morbid races of men, the very characteristics of which, he said, must cause the cessation of their existence. He referred to some tables in which he had indicated the causes of degeneration of the masses not depending on civilization—alcohol, opium, tobacco, noxious food, malaria, and morbid diathesis; and causes dependent thereon—the great town-system, mental excitement, struggle for existence, deleterious trades, the factory-system, and colonization. As respects alcohol, he considered it, in moderation, not injurious; but he regarded the tendency to take it in excess as probably dependent on peculiar organization, which it is well worth while to investigate. He denied, however, that any deteriorated alcoholized race of people existed. He spoke of the increase of heart-disease, apoplexy, convulsions, and other accidents of dentition, parturient diseases, and cancer, in modern times; and asserted that softening of the brain now came on earlier in life than formerly. There was, however, no distinct evidence that the brute strength of the human race had declined, though, as to intellect, there was no proof that the brain had improved in quality since the time of Plato; and, in morals, it was a drawn battle between ancient and modern times. To the medical profession it legitimately belonged to investigate the real truth in all such controversial questions; and we might well point to our deeds in repelling with scorn the assertion in a political quarterly review that no sanitary improvement need be looked for from the medical profession, whose interests were too much bound up in the prevalence of disease to cause them to be hearty sanitary reformers! The lecture was received with hearty and continued applause.

WESTMINSTER HOSPITAL.

The winter session commenced at this hospital on the 1st inst., with an address by Dr. F. Bird, which was received with marked attention and applause by a very numerous auditory assembled in the lecture theatre. The Dean of Westminster presided. The meeting afterwards adjourned to the Boardroom, where the Very Rev. the Dean, after a short but eloquent and feeling address, distributed the medals, certificates, and prizes to the successful competitors in the previous examinations. Many objects of scientific interest were displayed on the tables. Refreshments were served in an adjoining room.

List of the Prizemen for the Session 1857–58.

Clinical Surgery: Prize, Mr. T. W. Trend. *Chemistry:* Medal, Mr. T. R. Adams; certificate, Mr. J. W. Middleton. *Anatomy:* Medal, Mr. T. W. Trend; certificate, Mr. John M'Cann. *Physiology:* Medal, Mr. T. W. Trend; certificate, Mr. T. R. Adams. *Surgery:* Medal, Mr. J. C. Harris; 1st certificate, Mr. T. W. Trend; 2nd certificate, Mr. C. F. Squire. *Medicine:* Medal, Mr. C. F. Squire; certificate, Mr. T. W. Trend. *Dental Surgery:* Prize, Mr. John March; certificate, Mr. J. W. Middleton. *Botany:* Medal, T. R. Adams; certificate, Mr. A. C. Judges. *Materia Medica:* Medal, Mr. T. R. Adams. *Forensic Medicine:* Medal, Mr. T. W. Trend; certificate, Mr. J. C. Harris. *Midwifery:* Senior Class, Medal, Mr. T. W. Trend; certificate, Mr. J. C. Harris; Junior Class, Medal, Mr. T. R. Adams; certificate, Mr. Samuel Matthews. *Clinical Midwifery:* Prize, Mr. T. W. Trend. *Practical Chemistry:* Prize, Mr. T. W. Trend.

Miscellaneous Correspondence, &c.,

GALVANISM IN DENTISTRY.

To the Editor of The Lancet.

Sir—The application of galvanism in the extraction of teeth is likely to occupy much attention, and as this new agent for producing local anæsthesia can be employed *without danger*, a great boon will be secured to the world, should the invention, after standing the test of experience, realize the sanguine anticipations of the originator. This being the case, perhaps you will kindly allow me space to give the history of the introduction of the agent into this country. Some statements have been made upon the subject in lay journals, which, I think, should have been reserved for professional publications; however, as these statements have been but partial, I will proceed to narrate how the invention was introduced to the notice of the profession in this country.

The first public mention of galvanism as applied to tooth-extraction is to be found in the last July number of the (London) *Quarterly Journal of Dental Science* (p. 254), wherein Dr. Berry, of Philadelphia (U. S.), writes that some few dentists had adopted the agent in America; and that a gentleman, a fellow-citizen, claimed to be the inventor, but that he was under an impression that this was a mistake, and that the method of operating had been practised in England.

The next that we hear about the process is in the *American Journal of Dental Science*, which reached England about a month ago. From this journal it would appear that great attention has been given to the matter in the United States. Dr. J. B. Francis claims to be the inventor, and has secured his rights as such by letters patent. A committee of the Franklin Institute of Pennsylvania, had been appointed to investigate the value of the discovery. In the course of the report of this committee the following observations are made:—"One hundred and sixty-four teeth were extracted in the presence of the committee." "The committee is satisfied——that in a large majority of cases of extraction with this apparatus, *no pain whatever* is felt by the patient." "To test whether the effect might not be merely mental, the current was broken without the patient being aware of it, when the usual pain was experienced, although, in the same patient and on the same occasion, teeth had been removed while the current was flowing without causing pain." "The operator requires no new instruments except the battery and coil."

In the specification of the patent, which is published at length in the American journal, the *modus operandi* is fully given; and it would appear that no time was lost in this country in profiting by the circumstance, testing the value of the process, and publishing the result. Candour to our transatlantic brethren, however, demands that the source from which the idea was produced should be made known, in addition to the mere announcement of the fact that galvanism has been successfully employed by individuals in this country.

The whole subject will, I trust, be sifted by the College of Dentists; in the meantime whatever information can be collected by the medical and dental journals will be of interest to the profession, and probably prove advantageous to the public. I am, sir, your obedient servant,

A Member of the College of Dentists
Sept., 1858. of England.

ELECTRICITY *vs.* CHLOROFORM.

To the Editor of The Lancet.

Sir,—Although I was the first to make, take, and administer chloroform this side the Tweed, I am by no means sorry to find that it is likely to be superseded, for allaying pain in dentistry and other minor operations, by electricity, which promises great results without danger. I have constructed an apparatus, inexpensive and self-acting, for its proper application. The importance of having an apparatus self-acting must be evident to all, so that the hands of the operator may be free to act, and the operation performed without the necessity of a third party. A few pence per week will keep the battery charged.

I am, Sir, your obedient servant,
William Hooper, Operative Chemist.
Pall-mall East, Sept., 1858.

SANITARY LITERATURE.

[LETTER FROM DR. C. J. B. ALDIS.]

To the Editor of The Lancet.

Sir,—Having met with a Latin thesis on "Public Health," published at Leipsic in 1771, by Dr. John Gottlieb Arnold, I thought that a notice of its contents in your journal might interest some of your readers. It is entitled "De Removendis Sanitatis Publicæ Impedimentis," and refers in the first place to "civitatum felicitas"—a subject which shows the necessity of wisdom and art, not only in constructing a state, but also in enlarging, preserving, and defending it when founded and built. There is need for "medicorum consiliis." "*Medicorum* tamen opus quoque est consiliis, si quidem, ut cives fortunis suis tuto et constanter uti possint, efficiendum fuerit." A note to this sentence alludes to "Nicol. Pagemann, de fide, quæ medicis apud Ictos est; nec non Mich. Alberti, de tuenda reipublicæ sanitate, per bona medicorum consilia."

The second chapter contains remarks upon "Annonæ penuria," and recommends magistrates, in order to establish the public security and tranquillity, to be examples worthy of imitation, as well as dispensers of salutary laws, taking care that there is an abundance of the necessaries of life. How careful the Roman ædiles were in rejecting "reprobas merces" and bad meat; nor did they deserve less praise who enabled the poor to purchase food at a less price, so as to soften their misery, by doing which they were esteemed worthy of an oaken crown.[*]

The third chapter treats upon "Vinorum corruptio." An opinion is given strongly advising an anxious inquiry into all kinds of drinks by skilled medical men; the quality of wine especially deserved more attention. By far greater danger threatens when wine is impregnated with astringent or corrosive substances. Then follows a long list of articles by which wine was adulterated, such as Brazilian and Santal wood, dragon's blood, catechu, bole, alum, sulphuric acid, &c.[†]

The fourth chapter relates to "Aquarum vitæ, et id genus, abusus." It appears that these "waters of life" suited some palates better than wine, for some were stronger and cheaper. They had various enticing names, and were insidious to many on account of their beautiful colour and sweet taste. The root of hellebore was put into beer, and produced excessive vomiting and purging. Then follow the symptoms and diseases which accompany an immoderate use of wine, with allusion to the bad habit of drinking "punch et bishop dicta, plenis pocillis, et ultra sitim."

The fifth chapter includes Luxury, from which most unhappy origin, as from Pandora's box, numerous physical evils proceed. Indeed, "luxuria omni ætati turpis, atque maximè gravibus viris fœdissima est."[‡]

The sixth chapter is a continuation of the former argument. How much loss happened to the public health, at the time of the Romans, from taverns and tippling houses is evident from the testimony of Suetonius alone,[§] qui *hoc ædilibus datum fuisse negotii*, refert *popinas ganeasque*

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[*] Vopiscus in Aurelian, et Dio Cassius, lib. xlix.

[†] Turpe et illiberale est lucrum mercatoris, cum vendit fucosas et fallaces merces. Georg. Agricola de re metallicâ, lib. i.

[‡] Cicero de Offic., lib. ii.

"Luxuries, prædulce malum, quæ dedita semper
Corporis arbitriis, hebetat caligine sensus,
Membraque Circeis effeminat acrius herbis."
Claudianus de Laude Stiliconis, lib. ii. v. 132.

[§] In vita Siberii, cap. 34.

usque eo inhibendi, ut ne opera quidem pistoria *vanalia proponi sinerent.*

The seventh chapter notices chemists' shops, the need of an excellent quality of drugs, aptly prepared.* The danger to the public health became so great from ignorant chemists prescribing that this liberty was interdicted by the Elector of Bavaria in 1750, and dispensing medicines in monasteries was also prohibited, because the persons employed were not sufficiently skilful.

The eighth chapter has reference to "Quæ gravidis nocere poterant." The ninth is an interesting chapter upon the care of children. The tenth chapter comprises injuries arising from animals, dogs, and swine, the former producing rabies, and the latter contaminating rivers, so as to destroy the fish and injure the public health.

It is also stated that not many years previously stables containing cattle were much celebrated in France for the cure of consumption, which was not confirmed by the results.

The eleventh chapter is the "Conclusio," which ends with the following appropriate motto :—

> "Nam, quidquam utilius vix urbibus arbitror esse,
> Corpore quam sano populo si vivitur omni."

I am, Sir, your obed't serv't,
C. J. B. ALDIS, M.D.,
Medical Officer of Health for St. George's, Hanover-sq.

THE TREATMENT OF BURNS.

To the Editor of THE LANCET.

SIR,—A short time since, when commenting on a case of severe burn then under treatment in the Royal Free Hospital, you suggested as worthy of trial in our hospitals a plan of treatment pursued in Massachusetts, consisting of the application of a thick mucilage of gum acacia over the recent burn, and then dashing this well with dry powder. Some time ago, while a resident officer in King's College Hospital, I tried a method which in some sort resembles this, but which, on the whole, I think possesses some advantages over it. At that time I was not aware that any similar plan had been followed, but I can add my testimony to the very efficient way in which it acts.

The treatment to which I allude consists in the application of a mixture of collodium and castor oil, in the proportion of two parts of the former to one of the latter. It will be found that these two substances mix in the most perfect manner, and do not afterwards separate. I tried many other oils, thinking that perhaps the irritant principle of castor oil would act prejudicially on an inflamed surface; but none seemed to answer so well; many of them, indeed, would not mix at all; and I never found any ill effects follow its use. The mixture may be kept ready for use for any length of time in a bottle well stoppered. It should be used thus :—As soon as the accident happens, the parts injured should at once be well covered with the mixture, applied with a camel's hair brush. In a few minutes this will have completely dried, and have left a firm, adhering covering. A second coating should then be applied. I deem this advisable to make it more effectual. Nothing more need be done at present; the case may be left quite exposed, and no fear need be entertained of air reaching the wound; it is felt almost as if a new skin were applied. Now and then it should be looked at, to see if any cracks have been made by the movement of the parts; and it is well, for the first two or three days, to paint it over with the mixture night and morning; no other local treatment is necessary. In a few hours it will be found that the inflammatory action has greatly subsided, and in a few days suppuration will be sure to have begun under the artificial covering. This must be removed. A poultice, either of bread or linseed-meal, will readily effect this; one generally suffices. A clean, healthy, granulating surface is what we have now to deal with, and this may be dressed as any ordinary wound; water dressing is, I think, the best, but simple cerate, or any other mild application, may be preferred by some.

A large number of cases have been treated in this way at King's College Hospital; indeed, it is now quite the recognised plan, and experience proves its superiority over the older methods. The advantages gained by it are these :—There is almost an entire freedom from pain. I have seen it applied in extensive burns of children, and so great was the relief that they would hold out their arms to have it applied. The covering formed is much more complete for preventing the contact of air than any other, and, from its transparency, we are able to see the condition of things underneath, without at all disturbing the dressing, which is always a most painful proceeding in these cases. Besides, it is much easier of application, much less inconvenient to the patient than bundles of cotton wool, (especially where the face is the part injured) cleaner, and more agreeable than the old carron oil, and unquestionably better than the application of powders, which always in a little while form with the discharges thick, hard scabs, very painful to remove, and very injurious if allowed to remain. In the after treatment, too, when its removal is necessary, this is easily effected, and without any suffering to the patient, contrasting very happily with the immense amount of pain and trouble which cotton wool occasions. This plan is applicable in any case where treatment of any kind can be followed.

I may mention, that I have also used this measure in the local treatment of erysipelas, and with the happiest result. There is no doubt that the contact of the air to any inflamed surface is exceedingly irritating, nor is the skin free from this influence. In this way I believe it is that by effectually preventing all contact of air, so much good results from its application in cases of erysipelas; it is much more convenient and more effectual than covering the parts with flour, starch, or hot fomentations with oil-silk, which serve no other purpose, in my opinion, than that mentioned above; of course, when suppuration has begun, fomentation or poultice is the better thing to apply. I am, Sir, your obedient servant,

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* Confer A. Q. Revini Dissertatio, *De Medicamentorum Officinarum Censura.* Leipsiæ, 1701.

A. Meadows, M.B., *Lond.*

Mortimer-street, Cavendish-square, 1858.

MEDICINE BOTTLES.

[LETTER FROM DR. THOMAS P. HESLOP.]

To the Editor of The Lancet.

Sir,—You will, perhaps, not think it beneath the scientific dignity of your journal if I venture to draw the attention of the profession to the question of medicine bottles, and what should regulate their size.

A few years ago a great improvement was effected in fluid measures by the adoption of the imperial pint, or 20 oz., instead of the wine pint, or 16 oz. But it is a misfortune that the London College of Physicians did not go a step further, and advise the medical men and pharmaceutists to regulate their bottles of medicine by the new standard. The time-honoured 8 oz., 4 oz., and 2 oz. bottles bear no longer the same relation to the apothecary's pint as in times of yore. The inconvenience of the bottle measures commonly employed was great always, inasmuch as they rendered the exact division of medicines difficult, and their apportionment on the part of the attendants of the sick unnecessarily complicated. But it is still greater now, while no other reason than custom can be offered for the retention of a sub-multiple of 16, which, as I have already shown, is an anachronism. I suggest that an entirely new series of bottles should come into use for medical purposes, and that the basis of their arrangement should be the imperial pint, as follows:—

Four tablespoonfuls..	$\frac{1}{10}$...	20 oz....	1 I. P.
Two „ ...	$\frac{1}{10}$...	10 oz....	$\frac{1}{2}$ I. P.
One tablespoonful....	$\frac{1}{10}$....	5 oz....	$\frac{1}{4}$ I. P.
One desertspoonful...	$\frac{1}{10}$...	$2\frac{1}{2}$ oz...	20 drachms.
One teaspoonful.....	$\frac{1}{10}$..	ʒ i. ℥ ii..	10 drachms.

The advantages of the above arrangement must be sufficiently obvious at a glance. When the physician is prescribing powerful drugs, he is often perplexed how to apportion his dose, and his work is embarrassed by thinking of $\frac{1}{12}$'s, $\frac{1}{8}$'s, $\frac{1}{6}$'s, &c. Undoubtedly greater precision would be given to prescriptions if he had only to reflect how much of his remedy a tenth would constitute. In clinical teaching, it would greatly facilitate the professor in his efforts to communicate an exact knowledge of doses to his classes if one unvarying standard could always be referred to, and would much lessen the labours of the learner in the acquisition of this important branch of medical education. A particular dose would soon become part and parcel of every bottle; and, in this way, the liability to error on the part of the dispenser might be lessened. The frequency with which such mistakes as directing one tablespoonful instead of two, and *vice versâ*, and a dessert instead of teaspoonful, are made, is a very serious matter, and anything which tends even slightly to diminish the probability of error in this point is worthy of consideration.

Another valuable element in the proposed arrangement would be, the marked difference in size of the different bottles. At present it is notorious that constant mistakes occur from confounding a 6 oz. with an 8 oz., a 4 oz. with a 3 oz., a $1\frac{1}{2}$ oz. with a 2 oz. bottle. These numerous varieties, near each other in size, are unnecessary and perplexing. Every practical purpose can be served by the new series.

Independent of the scientific necessity for a re-arrangement on the basis mainly of a submultiple of the imperial pint, the value of being able always to direct tenths of the remedies employed, will commend itself to the physician. I take it for granted that the "spoonful" of one sort or another will still be the popular mode of administering medicines. It would, indeed, be difficult to suggest any measure so general and so accurate which would have the slightest chance of displacing it.

In the last column of the Table I have indicated the manner in which the bottles should be marked. I think it very desirable that they should be distinguished in some way, and the one suggested will be the easiest to understand and the least costly. It is especially in the two smallest bottles of the series that the new plan will be found to work best. The $2\frac{1}{2}$ oz. may well serve in the place both of the 3 oz. and 4 oz., for children from seven to fourteen years of age. This bottle being exactly 20 drachms, will certainly be most convenient to the prescriber; but even less so than the next in size, at the bottom of the scale. The 10 drachm bottle will be of incalculable service in prescribing powerful drugs in small quantities; it may take the place of the 1 oz., $1\frac{1}{2}$ oz., and 2 oz., now in use, and efficiently perform the function of all; it would be the bottle of infantile life, and eminently useful for the linctus, sleeping-draughts, liniments, &c.

It will doubtless strike the reader that a better plan would be instituted by making this last the unit of the series, and all the others simple multiples of it. This could not be denied if ten fluid drachms instead of eight made an ounce. This simple change would be of immense service to the physician. The half pint would then be 100 drachms, the quarter pint 50 drachms, and the pint 200 drachms; the unit of the series being 10—for we may safely leave out of count the minim. It is to be lamented that the Royal College of Physicians has not the power to declare that their fluid ounce means ten fluid drachms; and it is especially provoking, as we are the only persons in the community, except chemists, who use any fluid measure below an ounce. But we may well despair of anything being done in this direction for many years to come; and meanwhile, for the purpose of remedying a grave inconvenience, I propose the imperial pint to stand to us much in the same relation as the pound sterling to the financial reformer. It would doubtless be better to start a system of money with a franc, or something like it, and proceed by multiples and sub-multiples from it. But all reforms of a permanent nature seem to grow like the trees of the forest, slowly. We, like the bankers, must be satisfied with an instalment of improvement. If ever the decimal system in measures, weights, and coinage, comes into general use in this country, it will only be after members of scientific professions and educated persons have habituated their classes, their readers, and their own minds, to the system.

I submit this plan of medicine bottles to the criticism of my brethren as a small contribution to a great reform, and as a remedy for an experienced inconvenience.

I am, Sir, your obedient servant.
Thos. P. Heslop, M.D.

Temple-row, Birmingham, 1858.

News Items, Medical Facts, &c.

The Belgian Government has just authorized the hospitals, bureau de bienfaisance, and churches of Ghent to accept legacies of 200,000f., 50,000f., and 30,000f., left them by a M. Lemmens.

Corns Cured by the Tincture of Iodine.—Drs. Varges and Wager state, in the *Zeitung für Med. und Chir.*, that painting inveterate corns with tincture of iodine three or four times a day with a camel's-hair brush will remove them in a very short time. When the corns are situated *between* the toes, the tincture should be mixed with glycerine, and the resulting fluid be spread on some German tinder, which latter is then placed between the toes.

Amaurosis Caused by the Administration of the Disulphate of Quinine.—It is well known that the sense of hearing may be variously affected by the ingestion of the above-mentioned alkaloid; but examples of its interfering with vision are not numerous. Some have, however, been cited by Messrs. Trousseau and Pidoux, by M. Briquet in his work on Peruvian Bark, and by M. Nélaton. We find that Prof. Gräefe, of Berlin, has met with two cases of the kind. In one the sight of the right eye became more and more dim as the doses of the quinine were increased. Local bloodletting and setting aside the use of the quinine soon removed the unpleasant symptoms.

Pepsine Wine.—We find, in "L'Union Médicale" that the following pepsine wine is extremely agreeable and efficacious: Take of starchy pepsine, prepared according to Messrs. Gorvisart and Boudault's formula, one drachm and a half; distilled water, six drachms; white wine (of Lunel), fifteen drachms; white sugar, one ounce; spirit of wine (33°), three drachms. Mix until the sugar is quite dissolved, and filter. One tablespoonful of this wine contains about fifteen grains of pepsine, and may be given after every meal.

A Remedy for Gout.—Dr. Belli states, in the "Gazzetta Medica di Toscana," that he has for many years succeeded in curing gout in the following manner. He gives, for two or three days every fortnight, or at the first symptoms of fit, a purgative composed of from ten drachms to one ounce of Epsom salts, twenty-four grains of nitrate of potash, and about one grain and a half of sulphate of iron, the whole dissolved in a pint and a half of water. With weak subjects, the purgative is given only every other day. The fourth part of the whole solution is given every successive half hour, with a few cups of light broth, or an infusion of althæa officinalis, tea, or camomile. An excellent adjuvant to this method is the juice of the wild chicory, of which three ounces should be taken every morning, fasting, during the greater part of the year, or the whole twelve months. A decoction of the root of the same plant may be substituted, and either should be sweetened with an ounce of wild strawberry syrup. (It is a pity Dr. Belli says nothing of diet.)

Lock-jaw.—The "Abeille Médicale" details a case of tetanus treated by chloroform. The inhalations were continued at intervals for seven days, with great relief. At the end of this period the spasms assumed a remittent type, and the cure was completed by the administration of the sulphate of quinine. A curious fact occurred in this case: the patient, who, when in health, laboured under a slight degree of deafness, could during his illness hear all that was said in the room, even in a low whisper. This sensibility of the ear gradually disappeared as the cure progressed.

Case of Popliteal Aneurism Cured by Digital Compression in Twenty-four Hours.—A man aged fifty-two was admitted into the hospital of Louvania (Belgium), Dec. 14th, 1857, under the care of M. Michaux, with a popliteal aneurism, three inches in the vertical and three inches and a half in the transverse diameters. On the 15th, the patient was bled, and put on low diet; he had besides two grains of powdered digitalis, in four doses. At half-past three in the afternoon, digital compression was begun over the crural arch, and partially carried on until the next morning at four, when a little and hard tumour, the size of a nut, was observed in the aneurismal sac. At that period, total compression was begun, and at half-past eight the patient had swimmings in the head, which lasted about an hour and a half, whilst the body was bathed in perspiration. At nine o'clock, the posterior tibial artery had ceased to beat; but the aneurismal tumour pulsated as before. At eleven, the man complained of formication in his feet. From eleven to one, the tumour became hard; and at four o'clock, all pulsation in it had ceased. For safety's sake, the compression was carried on until nine A.M., on the 17th; and the man was discharged quite well on the 29th. The cure had thus been completed in twenty-four hours.—*Journal de Méd. et de Chirur. Prat., May,* 1858.

VOLTAIRE'S BRAIN.—The French Academy has received a proposition which caused them much surprise. M. Verdier, the grand-nephew of one of the surgeons who embalmed Voltaire, became by inheritance possessor of the brain of the patriarch of Ferney, which was preserved by his grand-uncle. M. Verdier wished to make a present to the illustrious assembly of the brain from which, in the last century, a complete philosophical revolution emanated. But the Academy found itself under the necessity of declining M. Verdier's offer on the ground that it possessed no *réliquaire* on which it could place this unlooked for deposit.

ON THE TYING OF THE ŒSOPHAGUS.—The Academy of Medicine of Paris have lately come to the conclusion of a long discussion on the above subject. The ligature of the canal in question is stated by Orfila, in his Treatise on Toxicology, to have been applied upon dogs in more than fifty cases, these animals having survived when the thread was left from twenty-four to thirty-six hours. It seems that doubts arose in the minds of two professors at the Veterinary College of Alfort, near Paris.—Messrs. Bouley and Raynal; experiments were made upon eight dogs, and five of these survived only a short time. Indeed, one lived only three hours, and another only one hour and three quarters. With two of the dogs the ligature was removed in two hours, and these did not perish. These facts were brought before the Academy by Messrs. Bouley and Raynal; and that learned body appointed a committee, before whom the experiments were repeated with nearly the same results. M. Trosseau has reported upon the proceedings, and has laid down ten propositions, of which the fourth is the most important. Its substance is, that no reliance can be placed on the poisonous properties of some substances which are introduced into the body for the sake of experiment whilst the œsophagus is tied; because the committee are convinced, from the experiments made before them, that dogs may die solely in consequence of the tying of the œsophagus. Hence it is plain that the toxicological experiments which Orfila made, after putting a ligature on that canal, require revision; and that his deductions may be suspected to be erroneous.

PROFESSIONAL REMUNERATION IN FRANCE.—Much sensation has of late been caused in Paris amongst medical men by a piece of *injustice* on the part of one who, from his place on the Bench (where nothing but *justice* is expected), held up a professional man to contempt and obloquy for an unproved offence, if the just demands of a surgeon for remuneration can be called an offence. The facts are these:—Dr. Nel, practising at Vaugirard, near Paris, was sent for in a great hurry to dress the foot of a man who had been injured in a quarrel with a woman. The persons who called in Dr. Nel had applied to two or three other medical men, who were, however, absent from home. The wound was dressed, and the surgeon, when on the point of retiring, was requested to draw up a certificate respecting the nature of the injury, the circumstances of the case, &c. This he refused to do unless he were at once paid for it; and asked five shillings for the certificate, and twenty pence for the visit. As no money was forthcoming, and merely empty promises were made, Dr. Nel took his departure without writing the certificate, and of course losing every hope of ever seeing the very moderate twenty pence due for the surgical attendance. Some time afterwards, the battery case was brought before a police court, where the plaintiff maintained, amongst other matters, that Dr. Nel had refused to dress the wound without being paid beforehand. Upon this theme the worthy, or rather unworthy, magistrate immediately descanted, calling down public execration on the poor surgeon's head. Dr. Nel, having heard of this unpardonable indiscretion, protested in the papers, and is going to bring an action for libel against the plaintiff. We have much pleasure in adding, that the Benevolent Medical Association have volunteered to come to his assistance respecting law expenses. This affair has given rise to rather sharp polemics between the *Union Médicale* and a political journal called *La Patrie.* The writer in the latter paper simply contends that the public have a *right* to medical men's services *gratis pro Deo;* and is eloquent in his abuse of those who timidly talk of remuneration. *L'Union Médicale,* on the other hand, shows, in forcible and extremely happy language, that the medical profession is not instituted or maintained by the state; that medical men are not only obliged to devote time and money to the study of their calling, but that the government even exacts from each the price of an annual licence. Is, then, such a man not justified in asking for the reward of his labours? Some may practise self-denial; but the magistrate had no right, adds *L'Union Médicale* very properly, of stigmatizing those who are neither able nor willing to work for nothing.

A TALE OF PETRIFACTION.—Strange tales come from far places. The *Californian Alta* of July 20th relates a marvellous story in a letter from Dr. Lichterberg, a German physician, at Fort Langley, Frazer River. It describes the death of a miner from petrifaction consequent upon drinking a solution of silica. Ernest Flucherspiegel, striking a *geode,* or large rounded mass of quartz, broke off a piece, leaving a cavity lined with large crystals, containing, it is said, about half a pint of fluid—"water of crystallization." This he drank: in fifteen minutes he was dead. The rigidity of the corpse was excessive; after about two hours and a half it was stiff as a board. Next day, a post-mortem examination was made. The smaller bloodvessels were solid, and apparently ossified. In the stomach and duodenum were several hard masses of the size of a hazel-nut, evidently partly composed of biliary matter, but hard as the hardest quartz. From the stomach was removed a mass of food of like solidity and induration, moulded to the shape of the antrum pylori. The *quasi* petrifaction of the contents of the stomach and duodenum was complete, but the coats of the stomach appeared nearly normal. The heart was as hard as a piece of red jasper, exhibiting here and there those varied colours which give such beauty to that mineral. It was separated from its connexions with the aorta, pulmonary artery, and vena cava, by strokes of the hatchet, and with some difficulty was broken into pieces. The greater bloodvessels were rigid as pipe-stems, and in some cases the petrified blood could be cracked from out the veins, exhibiting perfect casts of the valves. The lungs were not collapsed. The brain was only remarkable for the stony hardness of its vessels. By triturating a portion of the petrified blood and fusing it with carbonate of potass, and subsequently by the application of hydrochloric-acid test, silica was precipitated from a solution in a transparent jelly.

This case certainly presents a combination of marvels which render it perfectly unique in the annals of science, and beyond the boundaries of our credence.

It would be most desirable, and, indeed, essential, before this history can find a place in the records of science, that the *pièces de vérification* should be submitted to competent authorities.

EFFECTS OF FALCONY'S FLUID FOR EMBALMING, AND OF HIS MIXTURE FOR TEMPORARILY PRESERVING, DEAD BODIES.—A body was injected with the fluid at St. Bartholomew's Hospital some weeks ago during the hot weather, and has been used for anatomical purposes. Not the slightest decomposition has ensued, that process having become totally arrested, and the muscular and other tissues are as free from odour as before being submitted to the injection. The students who have been engaged upon the body have observed no inconvenient odour, except a faint, cheesy smell, not so powerful as to be disagreeable. The red colour of the muscles is entirely destroyed, and their consistence becomes tough and leathery, resembling dried meat. The structures become drier from the effects of embalming, and in process of time would become mummified. This drying process, together with destruction of the colour of the muscles, Mr. Holden considers to be an objection to the employment of the injection for anatomical purposes, howsoever valuable it may prove for embalming. The latter is, however, the special purpose and object of this preservative fluid, as announced by its discoverer, M. Falcony. It has been extensively employed in France for some years, and is spoken of most favourably by the medical and general press. So far as can be judged from the trial at St. Bartholomew's Hospital, the fluid injected into the vessels (through the carotid artery) would have the effect of thoroughly embalming and preserving the body.

About a fortnight ago, an amputated foot, leg, and thigh, in a most advanced stage of putrescence, were placed in a deal box of Falcony's mixture—a sort of powder, of which saw-dust forms the great bulk, intended for the temporary preservation of dead bodies—that is to say, filling a coffin with it, and surrounding the body, will effectually prevent decomposition ensuing for some weeks only, and the occurrence of any animal effluvia from the remains; thus allowing a good period to elapse before interment, for the satisfaction of the friends and relatives. These putrid remains, when placed in the mixture in the box, were undisturbed till the 30th of July, when the box was opened, and the foot, leg, and thigh placed on a table. They were found to be perfectly free from smell of a putrescent character, but had a more marked cheesy or adipocerous odour than the injected body. Decomposition had become arrested, and the structures were not now so moist. But, so far as could be perceived, decomposition would shortly recommence and proceed in the usual manner on being exposed to the air, thus differing from the injected body, all the tissues of which were completely permeated by the preservative fluid. The inventor does not, however, pretend that this powder will do more than preserve the body sweet and free from putrescence for the space of a few weeks. Mr. Holden thinks it might do this for five weeks; and our own opinion is that possibly six or eight weeks might elapse without the decomposition of bodies immersed in it.

It may be observed, that both of these substances are now generally used in the cities of Paris and Lyons, and many others in France, to embalm the bodies permanently, and also temporarily to preserve them previous to burial. M. Falcony is well known as a chemist in Paris, and his inventions have attracted much attention. The powder is of a whitish colour, mixed with saw-dust, of an agreeable camphoraceous odour, antimephitic, and at the same time antiseptic. It produces no alteration in the organic tissues, and instantly destroys any bad smell, which it evidently did with the leg and foot. It absorbs the liquid and gaseous products arising from the body. The effects of the embalming liquid on the external surface of the body, are the unusual whiteness and delicacy of the skin, and the preservation of the natural appearance for a considerable time, until mummification is ultimately produced. The use of the powder, it is presumed, will not interfere with the process of detection of poisons which may have been administered anterior to its use.

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THOMAS WAKLEY, SURGEON,

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DELIVERED BEFORE

THE MEDICAL SOCIETY OF LONDON.

BY VICTOR DE MÉRIC, ESQ.,

SURGEON TO THE ROYAL FREE HOSPITAL, AND TO THE GERMAN HOSPITAL, DALSTON.

LECTURE III.

ON HEREDITARY SYPHILIS.

Age at which the infant presents symptoms of hereditary syphilis: at birth; a few weeks, a few months, or several years old. Cases.—Uninfected state of the progeny of some syphilitic parents.—Infection of the mother through the fœtus.—Cases for and against this mode of contamination.

MR. PRESIDENT AND GENTLEMEN,—I had the honour of submitting to you, in our last conference, a few remarks on syphilitic eruptions, constitutional syphilitic ulcers, and the non-contagious character of these symptoms. Whilst offering these remarks, I indulged in the attempt of simplifying the classification of cutaneous manifestations; I endeavoured to arrange syphilitic ulcers in such a manner as to facilitate diagnosis and treatment; and I finally strove to present to you, in its true light, the question of the transmissibility of the systemic manifestations of the disease. I am afraid I have fallen very short of the object I had in view; but I trust in your kind indulgence, and am persuaded that you will not refuse your support where you perceive an honest endeavour to arrive at scientific truth. I hope you will again patiently follow me through this third and last conference, in which I propose to take up some points respecting hereditary syphilis.

When we consider the whole range of the phenomena which are presented by patients suffering from syphilis, we cannot help noticing that this affection calls almost equally for the attention of the physician and the surgeon; and it is especially in hereditary syphilis that this observation holds good. Nay, the greatest number of such cases come in general under the immediate notice of obstetricians, and of those of our brethren who are frequently called upon to attend upon lying-in women. It is, therefore, highly important that every one of us should be thoroughly conversant with all the merits of the questions connected with syphilis in general, and with infantile syphilis in particular. It is the family attendant who, as a rule, has to treat the offspring; it is he who has to decide upon the nature of the child's ailment; it is he who has to sift the history of the parents, and to undertake investigations of an extremely delicate nature.

Now as positive data are extremely valuable in the elucidation of knotty points, the necessity of collecting and publishing cases cannot be too strongly urged upon the profession at large. An accurate knowledge of the principal facts connected with hereditary syphilis will lead to more reliable means of diagnosis, and, hence, to a more successful treatment. Such an improvement is extremely desirable, because the great majority of children, born with this unfortunate germ lurking in their organism, perish at an early period of their existence.

No doubt remains nowadays, in any one's mind, as to the hereditary transmission of syphilis from the parents to their offspring; it should, however, be noticed that it is only since Boerhaave and Astruc, that this transmission has been clearly made out, if we except a passage of Paracelsus, who clearly stated, in 1529, that the affection descends from parent to child. Before and after this author, until we reach Boerhaave, the writers on the subject, as has been made out with much erudition by Diday, of Lyons, considered that infants became affected either during parturition, or suckling, or by subsequent contact. But the ascertained fact of infection of the germ has given rise, in modern times, to several questions on the subject of congenital syphilis, which questions have either not been satisfactorily answered, or settled by different pathologists in various, sometimes quite opposite, manners.

The most prominent amongst these questions are *the mechanism* of the transmission; the respective influence of the father or mother on the tainted offspring; the limitation of the time within which, after birth, the symptoms of infantile syphilis may be expected; the action of an infected fœtus upon a healthy mother; the contagious or non-contagious character of the material symptoms presented by a diseased child, &c. From these questions I shall, with your permission, select two for consideration this evening—1st. *The limitation of time as to the appearance of the symptoms;* and 2nd. *The action of the infected fœtus upon the healthy mother.*

Now, as to the time when symptoms appear in infants bringing the syphilitic germ with them into the world, we may divide it into three periods; first, at birth; 2nd, a few weeks after birth; and, third, at epochs varying from a few weeks to a few years.

That the children of syphilitic parents are often destroyed in utero by the virus, and are expelled at different periods of gestation up to the full time, is well known; but it should be recollected that few of these still-born infants present actual, *unmistakable* syphilitic symptoms. They all bear marks of decomposition, but these marks are almost the same as are produced by intra-uterine death from other causes. Still, I must say, that I have noticed, in two cases, a peculiar lividity and complete peeling off of the epidermis, which pathological appearances I have not observed, in the same degree, in still-born children who had died from unspecific causes. But the present question is, whether children, born alive, have been known to exhibit at birth marks of the syphilitic disease. Such cases are mentioned, but they are decidedly few, and they must be looked upon as exceptional. Out of forty-six cases of hereditary syphilis which have been under my care, and in which the children were born alive, I find that in only two the infants presented at birth distinct symptoms of syphilis.

The first case refers to a little girl, who was brought to me at the German Hospital, when ten months old, in September, 1856. She then had two muco-cutaneous papules on the left side of the anus, the size of fourpenny-pieces, and one on the right side as large as a sixpence. She was fat, and good-looking.

History.—The mother stated that the child *was born with the papules*, that they were very small at birth, disappeared, and had come again to the present size the last two months. She had been married eleven years, and had, while pregnant with this child, what she calls piles. On examination, I found she was still affected with muco-cutaneous papules. Husband said to be well. Four children were born before the present little patient, and are in good health. I prescribed mercury with chalk and Dover's powder, and the local application of calomel ointment; the child did well, but the mother left off coming before the completion of the treatment.

The second case, illustrating syphilitic symptoms at birth, is that of a girl, five weeks old when brought to me at the German Hospital, May 9th, 1857. She presented large spots of lepra over the whole frame, the patches being already yellowish-brown, but not very scaly; discharge from both ears of a purulent ill-smelling matter, also from the right nostril; snuffling; no vulvar discharge nor redness about labia. On the vertex, one impetiginous crust the size of a pea.

History.—The mother, a healthy-looking woman, with a round face, and marked with small-pox pits. Husband, a stonemason, whose head had been painful for some time. No other data respecting him. The mother has been married five years, and has had three children. The first child was still-born at nine months; the second child, a girl, is now two years and a half old, she was born quite healthy, but, about a week after birth, she had an eruption of the same kind as is seen upon the patient brought this day. No particular remedies were used, and she has done well.

The present little patient *was born with the eruption*, and a fortnight after birth the ears, and subsequently the right nostril, began to discharge. She is a puny child, and was still more so at birth. Has had on the vertex a bleb (pemphigus) of the size of a threepenny-piece, which gradually dried, and left the crust above-mentioned. The treatment consisted of half-grain doses of mercury and chalk combined with Dover's powder to the child, and bark to the mother. I saw the infant a week after the first visit; there was no particular change, she looked pale, and the discharge continued. I gave one powder, morning and evening, and suspect the child died, as the mother did not return.

It will be noticed that, in the first of these two cases, the mother was infected (most probably through the father,) so that the child was subjected to a kind of double syphilitic influence. But no kind of conclusion can be drawn from this case, as regards the circumstances which may favour the appearance of syphilitic symptoms at birth, as in the other case the mother was perfectly healthy. From these cases, and a few others, which have been put upon record by continental and English authors, the possibility of the presence of syphilitic manifestations at birth is proved; but tainted infants are, almost all, born with every appearance of health, and a few weeks generally elapse before the sad reality becomes manifest.

So much for the first period—viz., the phenomena presented at birth. Now, as to the few weeks which may elapse from birth to the first appearance of morbid symptoms, I shall endeavour to obtain some data from the cases which have come under my care in public and private practice. Out of the 48 cases to which I have alluded, I was able to ascertain in 24 cases at what period after birth the symptoms had appeared; and I find, irrespective of the kind of symptoms, (which, however, were all clearly made out by myself to be of a syphilitic nature), that these symptoms were noticed a few hours after birth in two cases; a few days after birth in four cases, (in one of these four cases the mother had successively three children, who all presented, a few days after birth, undoubted syphilitic symptoms); from ten days to three weeks after birth in five cases; and from six weeks to thirteen weeks after birth in ten cases. We have thus 21 cases in which the symptoms appeared before the child was thirteen weeks old.

The remaining seven cases are examples of the appearance of syphilitic symptoms at periods after birth, ranging from *thirteen months to fifteen years*. The seven cases run thus: in the first, the symptoms appeared thirteen months after birth; in the second, fourteen months; in the third, twenty-one months: in the fourth, two years and three months; in the fifth, eight years; in the sixth, twelve years; and the seventh, fifteen years.

These latter figures are well calculated to astonish, and the intervals are so unusual, that I am induced to trouble you with a brief sketch of each of these several cases. But before doing so, I may state that of the other twenty-one cases (in which the symptoms appeared before the children were thirteen weeks old), there are eleven showing a lapse ranging from a few hours after birth to three weeks, and ten cases lying between six and thirteen weeks, the two groups being therefore almost equal as to numbers. So that, according to my cases, there is about an equal chance for the symptoms to appear at periods lying between a few hours and thirteen weeks after birth. Diday, of Lyons, gives, in his valuable work on "Hereditary Syphilis," data obtained from the cases of various authors, and arrives at somewhat greater results for the first month after birth than I have gathered from my own cases. Thus, he finds, out of 158 cases, 86 which presented symptoms before the first month, 45 before the second month, and 15 before the third month. In comparing our cases, we have, for about the same space of time, the following proportion:—11 : 10 :: 86 : 60. Were our tables alike, 60 should be 78; the preponderance of the first month is therefore in Diday's cases only a trifle greater than in mine.

But I would just mention, that the framing of a table upon such wording as this, "before the first, second, or third month," as M. Diday has done, is somewhat imperfect, because, when you say *before* the third month for instance, there is no knowing whether the symptoms appeared on the second or ninetieth day after birth.

I need hardly say that the practitioner should possess some positive information respecting the time likely to intervene before the appearance of the symptoms, as questions will be asked by the parents respecting the age until which they may expect signs of the disease, and the time when they may reckon that the child is safe. Now, M. Diday considers that, after the third month, there is but little danger of seeing symptoms appearing, because, out of his 158 cases, there are only seven at four months, one at five months, one at six months, one at eight months, one at one year, and one at two years. But the danger seems, from the proportion of my own cases, to be much more lasting, as, out of twenty-eight cases, there are seven—viz., just one-fourth—ranging from thirteen months to fifteen years. Here is a short account of each of these seven cases:—

First case, thirteen months.—Henry S——, aged eighteen months, came under my notice at the German Hospital, Dec. 16, 1857.

State on first examination.—Extreme emaciation about the limbs, pelvis, and abdomen, not so much about face. The corners of the mouth and alæ nasi are ulcerated; scrotum and inner aspect of thighs much excoriated; on the sacrum is a swelling the size of a nut just drying; superficial ulceration of the internal aspect of cheeks; cough, no appetite, diarrhœa.

History.—Mother looking healthy; father, aged thirty-six, has had boils for the last ten months (perhaps these were tertiary tubercles); his lungs are out of order. These parents have been married seven years, and have one child nearly six years old; between this child and the present patient there have been *five miscarriages*, the mother being now near another confinement. The miscarriages varied from two to four months, and the mother always enjoyed good health. The child brought for advice was weaned at five months, the mother having no longer any milk. The boy was born in excellent health, and remained so for thirteen months; he then began to fall away rather suddenly. Has had a tumour on the head, which discharged a little.

This child had been for a little while under the care of my colleague, Dr. Sutro, and remained but a short time with me, so that the ultimate results of the treatment are wanting.

Second case, fourteen months.—Mary Ann W——, aged fifteen months, dark and good looking, came under my notice at the Royal Free Hospital, Feb. 17th, 1857.

State on first examination.—Large papules interspersed with pustules all over the body, thickest on the right arm and the neck; muco-cutaneous papules around the vulva; labia covered with ulcerated confluent papules; impetiginous crusts on the hairy scalp; small and flat ones on the soles of the feet; face clean. The child is restless and seems to be in pain.

History.—The mother was healthy at the birth of the child; when it was nine months old she was infected by her husband with sores and buboes, which, she says, came to suppuration. Child remained well until fourteen months old; she was weaned at thirteen months, and four weeks afterwards broke out as above described. The nipple of the mother on the right side has been ulcerated, but the child's mouth has remained sound. The mother has since had a papular eruption, which is now seen to be fading; her throat has been very sore. The child is falling away very much. No data about the father.

Some doubts may hang over this case, as the mother was not taken ill until the child was nine months' old. But I am inclined to think that the infant brought the germ into the world derived from an infected father. Were we even to believe that the mother contaminated the child at the time she had the sores and buboes, it might be asked how the infant remained well for *five months*, though exposed to a supposed immediate contagion.

The patient had mercury-with-chalk and Dover's powder, and recovered very nicely, the mother being then one month from her confinement.

Third case, twenty-one months. I have placed this case here so as to class it, but these twenty-one months mean, that the child has now lived so many months, and has not as yet presented any symptoms of syphilis, though at the time of the birth of the infant the father and mother had for the last seventeen months suffered from the most aggravated forms of the disease. The father had had sloughing of half the glans, eruption of large papules, and very obstinate sore-throat; whilst the mother, at the time when she became pregnant of this child, had gone through a very severe form of pustular eruption, had had ulcerated soft palate, loss of hair, and was actually suffering from a tubercular sore of the size of a dessert plate; and yet, up to March 8th, 1858, twenty-one months after the birth of the child, not the slightest symptom had appeared. Both parents were treated by myself, the father more completely than the mother, but they both had mercury, and it remains to be seen whether the influence of that metal may be admitted to have cured the child in utero, or merely retarded the symptoms, which may one day appear.

Fourth case, two years and three months.—The mother of this little girl was thirty-eight years of age when she presented herself at the German Hospital, in January, 1854. She stated that she was well up to June, 1853, when she felt a soreness about the vulva, and soon found that the right labium was swollen into a hard tumour, upon which a sore made its appearance.

Treatment.—Poultices, and a white powder which made the teeth sore. Her child was born before she noticed these morbid symptoms, and the husband confessed to having suffered from ulcerations about the generative organs.

When the mother found that she was diseased, she weaned the child at two months, and at the period the latter was brought to the hospital, being then two years and five months old, it had had for the last two months a well-marked muco-cutaneous papule at the verge of the anus. The part improved much under mercurial treatment, but the mother had severe ulceration of the mouth, being a very obstinate smoker. I suspect that she died, as she suddenly left off coming to the hospital.

Fifth case, eight years.—Eliza H——, aged forty-three, married, and her son eight years old, out-patients at the Royal Free Hospital, Sept. 11th, 1855.—*State of the mother on admission.*—Mucous papules inside the lips and cheeks.

History.—Applied here about six months ago with the same symptoms and ulceration of the soft palate. Has been married nineteen years, and had six children before she caught any disease from her husband. She had first a thick, purulent discharge when two months pregnant with the boy she brings this day. Was treated for it, but the discharge continued to parturition. Was confined, and the child is now eight years old. Has since had another child, whose age is at present one year and ten months. This latter child, which I have not seen, had at birth, watery bladders on its back; these dried off quickly, and nothing has appeared since but a little eruption on the scrotum. As I did not see this child, I did not place the case amongst those presenting symptoms of syphilis at birth, but it is plain that it belongs to that class of cases. The children born before the infection are quite well. The mother has had iritis and deep ulcers in the mouth for some time past.

The little patient brought this day is now eight years old, of fair complexion, healthy looking, but not strong; he is quite unblemished all over the body except the anal region, and has never had any ailment but a slight swelling behind the ear. He presents now (Sept. 11th, 1856) two muco-cutaneous papules about the verge of the anus.

Treatment.—The mother attended irregularly. She has had alum gargle, free use of caustic, and a course of blue-pill guarded by opium. On Nov. 6th the mother was well. The boy had red precipitate to the mucous papules, and two grains of mercury-with-chalk every night guarded with Dover's powder. In about four weeks he was suddenly salivated. In November the papules had quite disappeared, and he was advised to take for some time the syrup of iodide of iron.

Sixth case, twelve years.—William H——, twelve years of age, intelligent-looking, apprenticed to a carver, out-patient at the Royal Free Hospital, admitted Oct. 28th, 1856.

State on admission.—Profusion of confluent minute papules, somewhat resembling fleabites, on trunk and arms. On forehead and cheeks, patches, the results of dried vesicles; a few lichenoid spots on forehead also; no copper-colour areola. On nape of neck, similar patches somewhat more vivid in colour; a few covered with crusts. Right testicle three times the size of the left, soft and painless. Penis small; no hernia.

History.—Testicle has been large since he can remember; eruption three weeks ago. Father and mother quite well; four children besides himself, and younger, who present no eruptions. Sleeps with a boy fourteen. Seems to have been displeased with the drawing having been taken, and did not return.

I am free to admit that the eruption might here be looked upon as a relapse; we must then suppose that the boy had had syphilitic sarcocele in utero or soon after birth, and that the testis had subsequently wasted. The case is somewhat obscure, and I do not wish to give it undue importance.

Seventh case, fifteen years.—Michael M——, out-patient at the Royal Free Hospital in April, 1855.

State on admission.—One muco-cutaneous papule on either side of the anus, respectively of the size of a sixpence and a half-crown. Testicles and penis *remarkably small.*

History (given by the father).—The papules have existed six months. One year before the father's marriage (seventeen years ago) he had a chancre, for which he was treated in the Royal Free Hospital, then in Grenville-street; ever since, he has had, at various intervals, eruptions, ulcers, iritis, &c., up to a few years ago. Wife has had several children; the eldest fifteen (the present patient), the youngest two. All the children have been more or less ailing, with the exception of the one brought this day, who has remained well until the muco-cutaneous papules appeared. Wife never had any symptoms.

Mild mercurial treatment for the boy, and astringent ointment to the papules. The patient did not return to the hospital after this first visit.

I leave you to weigh the value of these cases; some, I am aware, are not quite conclusive, but even in deducting these, we still have those of thirteen months, twenty-one months (which has not as yet presented any symptoms), twenty-seven months, eight years, and fifteen years, which afford a very fair amount of probability. Now, I am too well acquainted with the sources of error which beset cases of this kind to adhere blindly to the opinion that the appearance of the symptoms is generally to be expected a long time after birth. All I would beg to maintain is, that the time may, without the slightest doubt, be protracted in exceptional cases. We must, however, not forget that the third case is that of an infant whose parents I have myself seen and treated, and whose child is, at the present moment, twenty-one months old and perfectly well. Who knows how long the child may remain so? The most encouraging circumstance of this case is the mercurial treatment which the patients have undergone. It plainly teaches that we may, with some hope of success, propose a mercurial course. to the mother when there is a fear of infection. Not only may we thus hope to prevent abortion or premature birth, but perhaps to free the offspring altogether from the syphilitic taint. And who can say that many a healthy child, now showing its ruddy and smiling face in our parks, has not been engendered by a tainted father, whose baneful influence was destroyed by the agency of mercury? Indeed I remember being asked for my opinion by a professional brother, about eight years ago, respecting undoubted symptoms of systematic syphilis. He underwent a mercurial course, which was very successful. About a year afterwards he married, and none of his children have as yet presented any external signs of the disease.

I may mention another very interesting case of non-infection of the child. Mary Ann M——, twenty years of age, an English woman, married to a Frenchman, applied to me in August, 1855. She had with her at that time a child seventeen months old, in good health; but she was herself covered with very large pustules, especially in the face. Six months before, she had a vaginal discharge for a month, and then noticed a string of sores on the vulva; they were much inflamed, and she could neither sit nor walk. These sores took four months to get well, and she observed at the time an eruption upon her body like small-pox. The teeth were not made sore by the medical man who attended her, and she suckled the present child, all the while. The husband confessed to an ulcer under the prepuce a little time before she had the discharge; he has now muco-cutaneous papules around the anus and on the scrotum, and suffers considerable pain. Sore throat in the two cases. They both underwent a course of iodide of mercury, by which their gums were affected. The husband persevered only for three weeks; the wife for two months. She recovered perfectly, and stayed away until December 26th, 1855, when she presented a deep ulcer, the size of a sixpence, on the left side of the tongue, towards the root. The development of the sore had been very rapid, being probably a tubercular ulcer. This disappeared under the influence of the same pills and cauterization with nitrate of silver.

In January, 1856, she fell in the family-way, and miscarried at four months. A deep ulcer now formed above the right breast, and healed towards May, 1856, leaving the usual radiated star. On the 1st of September of the same year she was again in the family-way, the eldest child, born before the contamination and suckled through the severest development of symptoms, being still quite well. The mother was now put upon iodide of potassium. She was confined in February, 1857, of a healthy child, which was brought to me. I watched it for several weeks, expecting a breaking out of the disease; but such was not the case, and it has remained well up to the present time.

This is therefore a twelvemonth's suspense, and may be classed amongst the series of cases illustrating retarded symptoms; but with her, as with the child, which is now twenty-one months old, there is no knowing how long she may remain well. Here, again, we may fairly suppose that the mercury has had a beneficial influence.

Such happy results do not, however, constantly crown our efforts. I had recently a very unpleasant example of such a fact, in a patient who was sent to me by M. Ricord. He underwent altogether three courses of mercury for relapses of secondary symptoms, and at last, as all the manifestations had disappeared, we allowed him to marry. A fortnight afterwards he showed me spots of syphilitic psoriasis, and his wife had an abortion at four months. She is again in the family-way, and I have advised a course of mercury for herself.*

But do the children who escape become scrofulous? Or do they suffer from various ailments, at the bottom of which lies the modified syphilitic poison! This is an important question, which I may not treat this evening; but I would venture to express my belief that much exaggeration has been indulged in on this subject. We shall hardly ever be put in possession of sufficient data to arrive at a reliable conclusion on this subject, and it is better to remain in doubt than venture upon uncertain theories.

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* The mercury was not taken, and I have learned since the delivery of this lecture, that she has had another miscarriage.

You perceive that I have endeavoured to bring before you this evening well-ascertained facts, and that I have avoided speculations. Pursuing the same course, I now call your attention to a mode of propagation of hereditary syphilis, which has been the subject of a very able paper by Mr. Hutchinson, of the Metropolitan Free Hospital. The author maintains, with several English and Continental authorities, that a fœtus tainted by a diseased father, and developing in the uterus of a healthy mother, may infect the latter through the placental circulation; and that such wives as lose their health after marrying men who have had systemic syphilis, do so, not because they are directly infected by the secretions of their husbands, but through the instrumentality of the fœtus, the miscarriages being sometimes so early as to be hardly noticed. Women, who do not bear children, or who do not conceive at all, would thus remain uninfluenced by the syphilitic taint of their husbands.

Now I am quite ready to agree with Mr. Hutchinson, M. Diday, and M. Ricord, that such may be the case, particularly as this mode of contamination is perfectly compatible with the physiology of child-bearing, and because very striking and numerous cases have been collected and brought forward by the supporters of this doctrine, especially by Mr. Hutchinson. But we must not leave in the shade the cases which might disprove the doctrine; for we should thus wilfully deprive ourselves of a portion of the facts which are to aid us in our search after truth. Now I have carefully computed the forty-four cases to which I have before alluded, and I find, that in twenty-one of them, both parents were diseased before the birth of the child. These cases, therefore, do not bear upon the present question. But, out of the twenty-three remaining cases, I perceive that in thirteen, the mothers, who had given birth to syphilitic children, remained in perfect health. In the other ten cases, the mothers, after being delivered of infected children, presented symptoms of syphilis; these ten cases proving in favour of the deleterious action of the fœtus upon the mother, supposing always that the father has no direct action upon his wife, except he have actual primary symptoms upon him. This latter position I am quite ready to admit; but what becomes of the thirteen cases in which the mother's health did not suffer at all?

I am anxious to state that the reasoning with which the action of the fœtus upon the mother is supposed, is extremely satisfactory; and that the blood of the fœtus, charged with effete particles, which is returned to the circulation of the mother, is calculated to favour the opinion, that she may be contaminated by her own unborn child. But if the theory, promulgated with so much talent by Mr. Hutchinson, is to be adopted by pathologists, we must find some way of explaining the thirteen cases in which the mothers remained in good health. It might, perhaps, be urged that the children in these cases were but slightly affected; or that the mothers possessed unusual powers of resistance; but we must not indulge in speculations, and I will just ask your attention for a few minutes to the following facts:—

First case.—This case has already been mentioned as exemplifying the development of hereditary syphilis in a boy, when he had reached his fifteenth year. The wife had several children before this boy; they had all been more or less ailing; the father clearly stated that he had had syphilis before his marriage, but the mother had throughout remained well.

Second case.—Here the mother casually stated to me, April 26th, 1855, having at the time on her arm a sickly-looking child, twenty months old, that she had had eight children before. The two first were abortions at four months, the six others were born at the full period, and died a few days after birth without an eruption, and from mere debility. The mother has never been ill. No data about the father.

Third case.—The mother presented herself to me at the German Hospital, June 14th, 1854, with a child, three months old, affected with hereditary syphilis. Married seven years, and has had five children before the one brought to me this day; none of these are alive at present, and the most they lived was two months. She went the full time only once; all the other confinements took place at seven months and five months and a half. Husband, thirty-two years of age, went to St. Bartholomew's Hospital before marriage with a bad leg; denies any other affection. Mother had soreness on private parts before the first child was born; made nothing of it. She is perfectly well, robust looking, and is suckling the present patient. The latter recovered with mercury.

In December, 1855, the same woman came with a second child, eight weeks old, who had presented, since a fortnight old, pemphigus about various parts of the body. The child whose case is mentioned above, and who is now twenty-one months old, accompanied her. It had grown much, but had rather a large head. Could not walk as yet, and had only two teeth. The infant, eight weeks old, also did well. I will just mention, by way of parenthesis, that I have now seen several cases of recovery of syphilitic children, who presented afterwards a great cranial development, and a peculiar rolling of the eyes. I am about collecting facts touching the question of relationship between hereditary syphilis and hydrocephalus.

Fourth case.—On July 19th, 1856, my friend, Dr. Lichtenberg, of the German Hospital, showed me the little boy of a seafaring man, three months old, with ulcerated muco-cutaneous papules on each side of the anus, the size of sixpence. First child; mother perfectly healthy: says she was never ill in her life. The papules had appeared when the infant was two months old.

Fifth case.—Charles N——, three months old; hereditary syphilis; out-patient of the Royal Free Hospital, Oct. 21st, 1856. Mother aged forty-one; father thirty-six; both said to be well; three children, the two first still-born at seven months. Present patient, third child. He recovered with mercury.

Sixth case.—On Sept. 26th, 1856, Mrs. W——, aged thirty, husband aged thirty-two, brought me a little boy, four months old, with marked symptoms of hereditary syphilis. She had been married seven years, and had had three children: a little girl, now in good health, three years and a half old; another who had died of scarlatina; and the present patient. The husband had had an ulceration, without bubo, four years before. The child recovered under mercurial treatment, and has had relapses since; but the mother never suffered.

Seventh case.—On the 6th of March, 1857, Mrs. E——, wife of a German of the Hebrew faith, came to me with an infant, two months and a half old, who was in a wretched condition in consequence of hereditary syphilitic taint. Mother and father above thirty years of age; the latter bore evident marks of the disease; the former was in good health. First child born dead; second child, a pretty little girl of two years, in excellent condition. The present patient recovered with mercury, and has had no relapse: the mother has remained well.

Eighth case,—Elizabeth B——, five weeks old, was brought to the German Hospital by her mother, on May 9th, 1857, with very distinct symptoms of hereditary syphilis. The mother says there has never been anything the matter with her; has been married five years. First child still-born at five months; second child is now two years and a half old, was born in excellent health, and about one month after birth had an eruption similar to the one now seen on the present patient. No remedies were used, and the child recovered. The mother has never had any ailment. The sick child she brought was treated by me for a little while with mercury; but I subsequently lost sight of the infant.

Ninth case.—Emma L——, two months old, thin and withered, was brought to the German Hospital, July 29th, 1857. The mother is looking very healthy; twenty-six years of age; first child delivered with forceps. Father's story rambling and unsatisfactory. Child recovered with mercury.

Tenth case.—Catherine W——, ten weeks old, was brought by her mother to the German Hospital, Nov. 19th, 1857, with well-marked symptoms of syphilis. The mother has another child, three years old, in good health; has been married six years; never had any discharges, or other ailments. Child was brought irregularly; no records as to the result of treatment.

Eleventh case.—Henry S——, eighteen months old, was brought to the German Hospital, Dec. 16th, 1857, with unusually severe symptoms of hereditary syphilis. Mother looking very healthy; father thirty-six years of age; has had boils for the last ten months; married seven years; one child, nearly six years old; five miscarriages between this latter child and the present patient; mother is now near her confinement; the miscarriages varied from two to four months; mother always enjoyed good health. Treatment begun by my colleague, Dr. Sutro, and partially continued by myself.

Twelfth case.—Alice W——, nine months old, was brought to the Royal Free Hospital, April 21st, 1857, suffering from hereditary syphilis. She was quite well until four months old. Father consumptive; no data respecting him; always refused to come; mother quite well. The child was treated for eight months with mercury and tonics; and at last sunk under very unusual tertiary symptoms.

Thirteenth case.—On the 17th of February, 1858, a woman thirty-two years old, was admitted with her child into the German Hospital, the infant presenting symptoms of hereditary syphilis, with severe purulent ophthalmia. Mother was married eight months ago; child born at seven months; husband confesses to secondary symptoms. The mother states that she has never had any sores, discharges, or other ailments. I should, however, add, that Dr. Lichtenberg, the resident physician, saw a few excoriations about the vulva. The child recovered with mercury. Albugo on both eyes.

I must apologize for the tediousness unavoidable in the relation of cases, however briefly narrated; but in a question of this kind it is important that facts should speak for themselves. These thirteen cases (or twelve, if the latter be not considered sufficiently conclusive) should be well weighed against the ten in which the mothers undoubtedly suffered; and taken into consideration in any further investigations on the subject, the question is in the meantime remaining *sub judice*.

And now allow me, Mr. President and Gentlemen, to thank you for the attention you have given to my remarks. I am deeply sensible of the imperfections of these lectures; but I am, nevertheless, conscious of having used my best endeavours to render them worthy of the audience I have had the honour of addressing.

Original Papers.

REPORT ON ANÆSTHESIA.

By R. M. Glover, M.D., F.R.S. Edin., L.R.C.P. Lond.

"Suum cuique tributo."

No. I.

Divisions of the Report.—1st. History of anæsthesia up to the time when the occasional danger of anæsthesia became established.—Re-discovery of anæsthetic agents in modern times.—Nitrous oxide, ether.—Fatal case of etherization.—Attempts to find a substitute.—Professor Simpson and chloroform.—Dr. Glover's experiments on chloroform.—History of chloroform.—Physiological properties first accurately stated by Dr. Glover.—Chloric ether.—Anæsthetic effects on animals first demonstrated by Flourens.—Dr. Simpson's application of it in practice.

Recent fatal cases having again called public attention and that of the profession to the danger attending the use of chloroform, and the eccentric character, if I may use such a phrase, of the fatal result,* I have thought right to use the occasion to review some facts, not generally known, connected with the early history of chloroform, which throw some light upon the action of the substance, before stating my views of its *modus operandi*, and what appears to me the best mode of preventing its occasionally calamitous effects.

I intend to divide this report into three parts. In the first I shall trace the history of anæsthesia up to the time of the first fatal cases, when the profession was in possession of facts which could leave no doubt that the new class of anæsthetic agents was capable of relieving pain in surgical operations, in midwifery, and so forth, but that their use in certain cases was attended with great risk. In the second part I shall enumerate and briefly analyze all the fatal cases from those early ones described in the first part up to the present time, with the view of arriving, if possible, at the cause or causes of death; and in the third part I shall give what I consider the real *modus operandi* of the agents, and my views concerning the best means of averting danger, and the remedial measures to be employed where death is threatened.

1. The history of almost all inventions displays a somewhat similar character. There is nothing new under the sun. Anæsthesia was not unknown to the ancients. Pliny and Dioscorides distinctly state that the root of the mandrake has the power of throwing patients into such a deep sleep as to render them insensible to the pain of surgical operations. Towards the close of the seventeenth century a secret agent was employed to render a King of Poland insensible during the removal of a portion of his foot. But the practice of anæsthesia had completely passed away. The first person to propose its renewal in our time was Sir Humphry Davy. He says, in his remarks on nitrous oxide: "As nitrous oxide, in its extensive operation, appears capable of destroying physical pain, it may probably be used with advantage in surgical operations, in which no great effusion of blood takes place." And it was with nitrous oxide that, in 1844, Mr. Wells, of Connecticut, first succeeded in removing teeth without pain, and suggested the use of this gas in surgical operations.* What is important is this: during the reign of ether there were a few cases where ether was supposed not to be disconnected with the cause of death. There was also the case of Mrs. Parkinson, who died at Grantham on the 9th of March, 1847, two days after the removal of a tumour, while she was in a state of partial anæsthesia; and although the post-mortem appearances were anything but decided, the jury returned a verdict of "died from the effects of ether." The only case, however, in which ether seems to have produced death with the rapidity in which the same result has unfortunately so often attended the use of chloroform, is one which occurred at Auxerre, in France, in August, 1847. A man, aged fifty-five, operated on for cancer, was rendered quite insensible by ether, when suddenly, just as the operation had commenced, the face turned violet, and then livid; the pulse became low, and then ceased to beat, and he was found to be quite dead in ten minutes from the commencement of the inhalation. The post-mortem appearances were chiefly congestion of the posterior portions of the lungs, with frothy mucus in the air-tubes, which were stained of a dark colour, and darkness and fluidity of the blood. These appearances closely resemble, as will be seen, what has been often found in chloroform poisoning.

While considerable discussion was being carried on concerning the merits of etherization, and especially its application to midwifery, all at once an immense sensation was excited by the announcement that a new remedy of superior power had been discovered by Professor Simpson. Many other ethers had been experimented on before this besides sulphuric ether—as muriatic, nitric, acetic, and formic ethers. There can be no doubt that a substance of no very certain composition, but containing chloroform, had been used on the recommendation of Mr. Jacob Bell, in the spring of 1847, and that Flourens had used the vapour of chloroform on animals about the same time, as we shall immediately see. Dr. Simpson's first publication was dated November, 1847. Long previously, I had published an elaborate series of experiments on animals with chloroform and its allied bodies, at a time when their very names were almost unknown, and stated their physiological properties with great accuracy; and this leads me to speak of chloroform and its previous history before Dr. Simpson's application of it to practice.

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* The *Morning Advertiser* lately, in a leading article, called for a medical commission to inquire into the action of chloroform. What shows the extraordinary notions entertained upon the subject, the writer speaks as if the public heard for the first time of the danger of chloroform. So far is this from being the case, that it will be found that both myself and Mr. T. Wakley, from the results of our experiments, before a single fatal case had occurred, warned the profession and the public.

* The history of the introduction of ether, and the rival claims of Messrs. Morton and Jackson, of Boston, will be found in the "British and Foreign Medico-Chirurgical Review" for January, 1852.

According to some historical references given by the late Dr. Pereira, in the *Pharmaceutical Journal*, chloroform was first obtained by Mr. Samuel Guthrie, of Sackett's Harbour, New York, by distilling a mixture of chloride of lime and alcohol. He supposed, however, that he had only obtained chloride of olefiant gas (the Dutch liquid), or muriatic ether, by a new process. He communicated his observations to *Silliman's Journal* for January, 1832, under the title of "A new mode of Preparing a Spirituous Solution of Chloric Ether." He said that he had used the product for six months occasionally up to the point of intoxication; had found it very grateful, producing a flow of spirits and inclination to loquacity, without leaving behind it the depression consequent upon the use of ardent spirits; and he recommended it, mixed with an equal quantity of water, as a safe, quick, energetic, and palatable stimulus. Mr. G. Black, of Bolton, in the *Medical Gazette* of September, 1833, published an article on the same substance, headed "Chloric Ether: a New Remedy in Spasmodic Asthma." He calls the ether a solution of chloride of carbon in alcohol, "brought into use by our American brethren," and considers it a light and diffusive cordial likely to be of use in spasmodic and adynamic states, and recommends it in doses of half a drachm. About the same time as Mr. Guthrie, M. Soubeiran distilled a mixture of alcohol and chloride of lime, and termed the product bichloric ether. Next, Liebig examined it, and, by some oversight, not finding any hydrogen, termed it chloride of carbon. Dumas, in 1834, first discovered its true chemical nature, and called it chloroform; while Liebig termed it perchloride of formyle.[*]

I was the first to describe correctly the physiological properties of chloroform and its analogous bodies, and to assign them their true place; and my experiments have a direct bearing upon the question as to the mode in which chloroform acts. These experiments were first published in the *Edinburgh Medical and Surgical Journal* for Oct. 1842, and were reprinted in THE LANCET, in 1848, also in the *Medical Gazette*. They are to be found as part of a work on the physiological and medicinal properties of the whole group of chlorine, bromine, and iodine, and their compounds, and the relations which these bear to the chemical properties of the same. My great object was to test the truth of the great law,—viz., that the chemical and physiological properties of bodies are closely related; and, taking up for experiment the least-known of the remarkable group which formed the subject of my paper, I was particularly led to test the properties of chloroform and its analogous bodies, then almost unknown. The chapter is headed, "Physiological Properties of Chloride and Bromide of Olefiant Gas, of Chloroform, Bromoform, and Iodoform."[*] The following are the general conclusions arrived at:—

"*Remarks.*—Great resemblance exists amongst the properties of this class of bodies, which appear to form a new order of poisonous substances, uniting in themselves physiological properties which are not found united in any class of poisons. The distinguishing characteristics are—first, the remarkable power which they possess of obstructing the pulmonic circulation, whether they are injected into the veins or introduced into the stomach; then the action on the spinal cord, and afterwards on the brain; and, lastly, the corrosive and irritant action exercised on the stomach. In the case where chloroform was injected into the carotid, death appears to have been produced by the loss of nervous power from the direct action of the poison on the brain. This effect might be accounted for by the obstruction thus induced to the flow of blood through the capillaries of the organ. The mechanical properties of this class of bodies may particularly fit them for obstructing the circulation through the lungs. It was shown, for instance, that when injected into the jugular, their smell is almost immediately perceptible in the expired air; so that the vapour getting into the air-cells may place the blood much in contact with the substance. The action on the spinal cord is very different from that of strychnia, to which my friend Dr. Cogswell compared it in the case of iodoform. Strychnia destroys the influence of the will over the muscles, but appears to excite the spinal cord, which loses its sensibility under the action of this class of poisons. The blackening of the mucous membrane of the stomach which these substances produce is another curious property. This effect appears to be compounded of the corrosive and irritant action of the poison, its effects on the colouring matter of the blood, and that congestion of dark blood found in the stomach in certain cases of coma. Where the poison was introduced directly into the circulation, we had the heart's action put a stop to, and its irritability destroyed when the dose was large. In other cases a smaller dose caused obstruction to the flow of blood through the lungs, while the heart's action continued; and in one case this obstruction was shown by the hæmadynamometer. In that case the pressure in the arterial system was diminished, but the heart's action continued."

I then remark on the great power possessed by the whole class of permeating the tissues.

It must be remembered that my experiments were performed at a time when nothing was known of the physiological properties of this class of bodies, except the trifling facts previously referred to; and even now the general correctness of my conclusions must be granted. I pointed out the fact of the insensibility of the animals when pricked and pinched, but I never thought of applying the facts I had observed to the prevention of pain in surgical operations; indeed, no one thought of anæsthesia at the time.

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[*] Chloroform, bromoform, and iodoform are analogous to formic acid, each of these bodies having three equivalents of chlorine, bromine, iodine, or oxygen, added to the radical formyle, which is C_2H. Thus we have respectively C_2 H Chl.$_3$, C_2 H Br.$_3$, C_2 H, I.$_3$, and C_2 H O_3.

[*] The general resemblance of the group is first pointed out; all may be used as anæsthetic agents except iodoform, on account of its solidity. Chloroform is then selected as the most remarkable, as a specimen of the rest.

The next great fact in the history of chloroform is, substantially, the first application of its vapour as an anæsthetic agent; for the chloric ether of Mr. Bell was at most only a mixture containing chloroform, and was not administered on account of the chloroform. On the 8th of March, 1847, M. Flourens, in a communication to the French Academy of Sciences, related some experiments made by him on animals with the vapour of chloroform. "It was especially by the effects of muriatic ether that he was led to try the new body known by the name of chloroform. At the end of some minutes—of six in a first experiment, and of four in two others—the animals submitted to the operation were distinctly *etherized.* The spinal cord was then exposed. The posterior roots of the spinal nerves were found to be insensible; of five anterior roots, only two preserved their motive power, the three others had lost it. Thus it is incontestable that the discovery of the anæsthetic properties of chloroform is due to a French philosopher.... Unfortunately, he confined his operations to animals."*

Nothing more of a public character took place with regard to chloroform, till, on the 10th of November, 1847, Dr. Simpson presented his first results at a meeting of the Medico-Chirurgical Society of Edinburgh. What these were it is unnecessary to repeat here. Suffice it to state, that to Dr. Simpson belongs the *sole* and *entire* merit of first applying the vapour of *pure* chloroform as an anæsthetic agent in the *human subject.*†

No. II.

The Experiments of Mr. Thomas Wakley on poisoning by chloroform.—His conclusions with regard to the occasional danger of its use.—First fatal case near Newcastle-on-Tyne.—Report of Sir John Fife and Dr. Glover, attributing the death to chloroform.—Contrary opinion of Dr. Simpson.—Fresh Experiments of Dr. Glover in support of his opinion. Opinion of Dr. Snow.—Rapid succession of fatal cases.

EVERYONE will recollect with what enthusiasm the new discovery was hailed; nor has the result to almost the whole extent, disappointed these anticipations. But soon a warning voice was heard. In the *Medical Gazette* of December 3rd, 1847, there is a letter from myself, in which, after giving the entire credit to Dr. Simpson of first applying chloroform to practice,* I refer to my old experiments with liquid chloroform, and add—"When the application of ether and *chloric ether* to anæsthetic purposes became known, I remarked to several of my friends, that without doubt all the class of bodies on which I had formerly experimented would possess similar properties; but was deterred from the fear of their formidable power of congesting the lungs from giving them in practice." I then go on to warn the profession that, "in some habits and cases, the use of chloroform must be attended with danger." And in the same number, in a leading article, the Editor calls special attention to this warning. Many communications (controversial some of them), on various points, followed speedily in the journals, on all of which it is impossible to dwell. But the next most important event in the history of chloroform is the publication of the experiments of Mr. Thomas Wakley, in the first number of THE LANCET for 1848.

The article was entitled "A Record of One Hundred Experiments on Animals with Ether and Chloroform, performed by Thomas H. Wakley, Esq., Surgeon to the Royal Free Hospital." In his preliminary remarks, Mr. Wakley says—"With respect, however, to the relative powers and advantages of the two agents which are now claiming from the scientific world such an intense degree of attention, facts are still wanting to enable the profession to determine with precision and accuracy the classes, characters, and description of diseases and cases in which the one agent ought to be preferred, and the other carefully avoided." He proceeds—"These experiments were not, however, commenced until I had repeatedly observed the effects of both agents on the human constitution. I had seen ether successfully used under the most trying circumstances. I had heard that the use of chloroform had been crowned with almost equal success. Which of the two is the best agent? Are they both equally safe? Can both be employed on all occasions? The experiments were made with small and large quantities of the substances, and all stages of the effects were witnessed, according to the relation between the largeness of the dose and the species and size and vigour of the animal. The symptoms produced by the ether and chloroform were very similar; but the chloroform was found to be the more powerful and more dangerous. At first, generally, struggles and cries, increased quickness and force of respiration, which then became deep and slow, and gradually in fatal cases decreased along with the pulse." But the symptoms produced by the inhalation of chloroform and ether, both in animals and in man, are now so well known that it is useless to describe them. The most important part of Mr. Wakley's paper is to be found in his general conclusions—"The results of some of the above experiments warrant, I think, an important practical application. On some points, at least, no room remains for doubt. An examination of two or three facts irresistibly impels the mind to this conclusion. Only four days previously to the death of that celebrated surgeon (Mr. Liston), whose loss is truly a national calamity, the sufferer himself, while labouring under a paroxysm of dyspnœa, thought that he might possibly find relief from the inhalation of the vapour of chloroform. The suggestion was adopted, the vapour was administered, but necessarily without any beneficial result. Why necessarily? Because the post-mortem examination exhibited lungs that were 'engorged throughout,' and an 'aneurismal sac' near the heart. Under such circumstances of disease, and in such a condition of the lungs, a more unfortunate or dangerous remedial agent than the chloroform could not have been employed. This is now incontestably proved by the dissections in the instances in which death followed the experiments which I have just recorded. The examinations prove that blood, almost black, had collected in the heart and lungs, and the great vessels connected with those organs, to a degree of intensity which was probably never surpassed. Anything of the kind more striking probably was never witnessed in post-mortem examinations.* What, then, is the practical application of the facts which are thus brought under our consideration? Why, obviously and necessarily, that when there exists any disease of the heart, any aneurism near to the heart, any threatening dyspnœa, or any tendency to an 'engorgement of the lungs,' it would be highly imprudent to recommend the inhalation of the vapour of chloroform or of ether; but that in any of the abnormal conditions here described, should the practitioner determine upon employing one of the two agents in question, *assuredly the more dangerous one of the two* would be found in the vapour of chloroform."

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* Bouisson: Traité de la Méthode Anæsthétique appliquée à la Chirurgie et aux differentes branches de l' Art de Guérir, p. 77.

† The following, from a pamphlet by Mr. Waldie, of Liverpool (1847), is interesting:—"To the best of my knowledge, from the result of many inquiries, it seems to have been introduced into this country, as a medicinal agent, first in Liverpool, where, indeed, in the form of a spirituous solution, it has been more known than in any other part of the country, and from which, I believe, the knowledge of its therapeutic properties extended. About the year 1888 or 1889, a prescription was brought to Apothecaries' Hall, Conduit-street, one ingredient of which was chloric ether. No substance being known there of that name having the properties of that with which the mixture had been previously prepared, Dr. Brett, then the Company's chemist, in investigating the subject, found in the United States Dispensary the formula of its preparation, and prepared some." Mr. Waldie states that the properties of the substance pleased some of the medical men, but the preparation was found of variable strength. He separated the chloroform, and dissolved it in a uniform quantity of pure spirit. He goes on to say that the vapour of this so-called chloric ether was used for anæsthetic purposes, "either in February or March last" (Mr. Bell). Then "when in Scotland, in October last, Dr. Simpson introduced the subject to me, inquiring if I knew of anything likely to answer. Chloric ether was mentioned during the conversation, and, being well acquainted with its composition, and with the volatility, agreeable flavour, and medicinal properties of chloroform, I advised him to try it;" which accordingly Professor Simpson did.

* The Editor, in a note, gives the priority to Mr. Jacob Bell, on account of the so-called chloric ether. But the reader will see how few knew what chloric ether was.

At length a fatal case of chloroformization occurred. This was at Winlaton, near Newcastle-on-Tyne, in the person of a girl named Hannah Greener, aged fifteen. The case will be found reported from the *Gateshead Observer*, in the *Medical Gazette* of Feb. 11th, 1848. The girl had been operated on for onychia, in the Newcastle Infirmary, on the 24th of October. The left great toe-nail was then successfully removed *under the influence of ether.* On the 28th, Mr. Meggison proceeded to remove the nail of the great toe of the right foot for the same disease. This, the first fatal case, is so instructive, that it deserves to be specially recorded. Mr. Meggison's statement was as follows:—"I seated her in a chair, and put about a teaspoonful of chloroform into a tablecloth, and held it to her nose. After she had drawn her breath twice, she pulled my hand down. I told her to draw her breath naturally, which she did, and in about half a minute I observed the muscles of the arm become rigid, and her breathing a little quickened, but not stertorous. I had my hand on her pulse, which was natural until the muscles became rigid. It then appeared somewhat weaker—not altered in frequency. I then told my assistant, Mr. Lloyd, to begin the operation, which he did, and took the nail off. When the semicircular incision was made, she gave a struggle or jerk, which I thought was from the chloroform not having taken sufficient effect. I did not apply any more. Her eyes were closed, and I opened them, and they remained open; her mouth was open; and her lips and face blanched. When I opened her eyes they were congested. I called for water when I saw her face blanched, and I dashed some of it in her face. It had no effect. I then gave her some brandy, a little of which she swallowed with difficulty. I then laid her down on the floor, and attempted to bleed her in the arm and jugular vein, but only obtained about a spoonful. She was dead, I believe, at the time I attempted to bleed her. The last time I felt her pulse was immediately previous to the blanched appearance coming on, and when she gave the jerk. The time would not be more than three minutes from her inhaling the chloroform." These are the exceedingly well-described external symptoms of many cases of chloroform-poisoning. Mr. Lloyd confirmed Mr. Meggison's statement.

The inquest was adjourned from the 29th of January to the 1st of February to admit of a post-mortem examination, and a report on the case by Sir John Fife and myself, who were employed for the purpose.

We presented a report, detailing the post-mortem examination, and giving our conclusions. We found the chief morbid appearances in the respiratory organs. "There was great congestion of the lungs, which did not collapse, and were mottled with patches of a deep purple, bluish, or scarlet hue; the pulmonary tissue was filled with bloody froth, which was also found in the interior of the bronchi, mixed with mucus. On examining the larynx and trachea, the epiglottis was observed to be reddened at the summit, and of a vermilion hue." The heart contained dark-fluid blood in both its cavities, very little in the left; the membranes of the brain were somewhat congested.

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* "The left lung was so black and engorged as to surpass any pathological state previously witnessed by Dr. R. Elliot and myself."—See my experiments with the chloride of olefiant gas (Dutch liquid) on a dog, published in 1852.

The jury returned the following verdict, in accordance with our evidence:—"We are unanimously of opinion that the deceased, Hannah Greener, died from congestion of the lungs from the effects of chloroform, and that no blame can be attached to Mr. Meggison, surgeon, or his assistant, Mr. Lloyd." I had stated that I had analyzed the chloroform, and found it to be pure; and that, in my opinion, *there would generally be found more danger from the use of chloroform in slight operations than in serious ones.* This bold and unhesitating opinion of Sir John Fife and myself at a time when all was *couleur de rose* with regard to chloroform, naturally caused a great sensation both amongst the public and in the medical world.

Sir John Fife, in his evidence, stated: "In my opinion, the cause of death was the congestion of the lungs, and that congestion I ascribe to the inhalation of chloroform. Of the power of chloroform to occasion such congestion, no doubt can be entertained, after the experiments of Mr. T. Wakley and Dr. Glover on animals." Of course, several controversial letters followed. Dr. Simpson attributed the death to asphyxia produced by the brandy-and-water, which was administered while she was unable to swallow, so that, in fact, she was choked by this fluid getting into the wind-pipe. Dr. Simpson's arguments are:—1st, the small quantity of chloroform administered. (But we shall find deaths from smaller quantities.) 2ndly, the similarity of the appearances to those produced by ordinary asphyxia. (There can be no doubt of the fact, but the question is, was the asphyxia produced by chloroform?) 3rdly, he argues thus on the facts of the case: "But, with the best of motives and intentions, brandy-and-water was poured into the girl's mouth. They were, of course, allowed to rest in and fill up the pharynx of the patient, as, in her state of syncope and anæsthesia, she was not in a condition to swallow them. The attempt at swallowing mentioned in the evidence was, I have no doubt, an attempt at breathing only, or at breathing combined with swallowing. But it was impossible for the patient, in her weak and torpid state, to inspire through a medium of brandy-and-water, any more than it would have been possible to inspire if the whole head and face had been immersed in the same fluid. The liquid would be partially drawn in the larynx. She rattled in her throat; in a minute more she ceased to breathe." The quantity of brandy-and-water was about two teaspoonfuls, and it seems very hard to believe that this could be the cause of death. In THE LANCET of April 22nd, 1849, I published a series of experiments on animals, comparing the appearances produced by drowning and chloroforming, in which experiments I thought I could detect marked differences between the two. I found the congestion and vascularity of the lungs much greater in cases of death produced by chloroform. I add: "But I believe that chloroform may kill by syncope, by its effect in stopping the heart's action, when we may have no congestion of the lungs. With regard to Professor Simpson's assertion, that the blood is *always* coagulated in the heart in death from chloroform, fluid in asphyxia, we see that it is neither uniformly fluid nor uniformly solid in either case......Professor Simpson's statement, that reddening of the epiglottis and congestion of the brain do not occur in chloroform poisoning, is shown to be erroneous, and no other arguments require to be stated against his assertions. He makes out, I think, that Hannah Greener was hardly properly under the influence of chloroform; but if this were the case, how came the reflex phenomena of both larynx and pharynx to be destroyed?—which would necessarily be the result according to the professor's view of the cause of death." Speaking again of the power of chloroform to produce congestion of the lung, I add, "and the experiments of Mr. Wakley have abundantly established the reality and formidable nature of this power."

It may appear that I have dwelt too long on this remarkable case, which constitutes an epoch in the history of chloroform. But although the controversy as to the cause of death in this case is now virtually decided by the occurrence of numerous similar cases, and by the unanimous voice of the profession, it cannot be useless to recall the ingenious arguments by which even such a man as Dr. Simpson sought to elude the admission of this occasionally fatal property of chloroform. In the third and concluding part of this report, after the analysis which I propose to give, I shall have to consider the mode in which chloroform kills. Of the numerous letters which appeared in the journals concerning the case of Hannah Greener, I quote the following extract from a very sensible one by Dr. Snow:—

"I agree with Dr. Simpson that it was not advisable to give brandy, or even water—the more so, as I do not agree with him that there was syncope; but that these liquids caused suffocation, by filling up the pharynx and being partially drawn into the larynx, seems improbable. This question, however, can only be determined by those who observed the symptoms at the time of death, and the nature of the froth found in the bronchi afterwards; as there is nothing in the reported evidence of the appearances on dissection which might not be caused by the kind of asphyxia liable to be induced when the effects of chloroform are carried too far, and these appearances are quite incompatible with Dr. Simpson's supposition that there was syncope."

Next followed a fatal case at Aberdeen, where a boy, who was in the habit of inhaling chloroform for the purpose of intoxication, was one day found dead. The post-mortem appearances were similar to those observed in the case of Hannah Greener. This occurred on the 8th of February. The next fatal case occurred in America, on the 23rd of February. The patient was a woman of thirty-six, in excellent health, though she sometimes suffered from neuralgic pains caused by decayed teeth. On the day in question, she walked three-quarters of a mile to have four stumps extracted by a dentist. The respiratory movements appeared to be free; chest heaving. While inhaling chloroform from Morton's inhaler, the face became pale. In about a minute, the instruments were applied, and the roots were extracted. In about two minutes from the commencement of the inhalation, the patient's head turned aside, the arms became slightly rigid, the body drawn somewhat backward, with a tendency to slide from the chair, the pulse had ceased, and the respiration also ceased about the same time. The face, previously pale, now became livid; also the nails; the jaw dropped, the tongue was protruded, and the arms became relaxed. Brandy-and-water, ammonia, and the cold affusion were employed. In thirty minutes, medical assistance arrived, when artificial respiration and electricity were tried. The chief post-mortem appearances were:—Considerable congestion of the lungs and of the lining membrane of the bronchi. The pleuræ were highly injected, and contained bloody serum. The heart was empty. The blood was everywhere fluid.

There could henceforth be no doubt of the occasional fatal power of chloroform. The great points were, how to ascertain the cases in which the agent might be employed, and those in which it ought to be avoided; also the precautions to be observed in its use; also whether another agent might not be found free from its danger. There are many other subordinate topics involved, showing the proportion of fatal cases. This, it was already known, would be but small. So great a boon as the relief of pain in surgical operations could not, in the nature of things, be expected, without a *per contra.*

In the next article, I shall proceed with the analysis of fatal cases, on which, and on the experimental inquiries already referred to, I propose to base the third division of this Report.

[Dr. Snow, in his posthumous work, just published, while agreeing with the correctness of the conclusion, that Hannah Greener was killed by chloroform, doubts how far this was due to congestion of the lungs. In the third part of this Report, this, as well as other matters connected with the physiological action of chloroform, will come under consideration, where, also, the mode of administration and other practical matters will be considered.]

No. III.

Fatal Cases of Chloroform Poisoning (continued).

There is considerable difficulty in giving a correct list of the deaths from chloroform. Some are given in particular journals and not in others; some are barely alluded to in newspapers. In the January and April numbers of the *British and Foreign Medico-Chirurgical Review,* for the year 1852, are two articles by me: the first, on "Anæsthesia and Anæsthetic Agents;" the second, on the "Practical Applications of Anæsthesia." The first contains a list of twenty-three fatal cases. At a meeting of the Medical Society of London, in the beginning of March of that year, Dr. Snow read a paper on the "Cause and Prevention of Death from Chloroform." He enumerated eighteen cases. Dr. Crisp, to whose analysis of the cases I shall recur, reckoned twenty cases in the discussion which ensued. Dr. Richardson said that "there were fatal cases from the use of chloroform to which neither Dr. Snow nor Dr. Crisp had alluded, and with which, consequently, he believed they were unacquainted. One of these had occurred lately at Bruges. .... He knew of two more cases in which the exhibition of chloroform had proved fatal; they had not been published, but he was aware of their having occurred." No doubt many cases have occurred which have escaped publication. I had taken much trouble to form a complete list of cases of poisoning by chloroform—i. e., as complete as possible; but the appearance of the posthumous work of Dr. Snow renders my labour to a great extent superfluous, as it contains a very full list, including one or two with which I was unacquainted. My plan, however, requires that I should go through the list of fatal cases, as briefly as possible. Besides, many readers of The Lancet will have no opportunity of consulting the work of Dr. Snow.

Case 4.—Patrick Coyle, in America, March, 1848. Disease, fistula. Chloroform had been previously used once. Time of inhalation, one minute; quantity consumed, about thirty drops. The pulse suddenly sank. The lungs were tubercular, with abscesses in each; the heart pale and soft; two or three ounces of serum were found in the pericardium; the bloodvessels contained dark fluid blood.

Case 5, an important one, occurred at Boulogne. A report of it was read to the Academy of Medicine on July 4th, 1848. Mdlle. Stock, aged thirty, had a fall from a carriage, and was wounded by a splinter of wood, which penetrated the skin of the leg and buried itself there. An abscess formed, which M. Gorré proposed to open. About fifteen or twenty drops of chloroform were placed on a handkerchief. She had scarcely begun to inhale, when she placed her hand on the handkerchief to withdraw it, and said, in a plaintive voice, "I choke." The handkerchief was withdrawn, and the operation proceeded with; but almost immediately she turned pale, the breathing became embarrassed, and she foamed at the mouth. She rapidly became inanimate. Frictions on the temple, cold affusion, artificial respiration, and ammonia, were employed to restore life, but in vain. The autopsy, made twenty-four hours after death, showed, chiefly, that the lungs were engorged with dark fluid blood, the mucous membrane of the bronchi of a bright red, the heart flaccid and empty, and some serum in the pericardium.

Case 6 occurred at Hyderabad, in the East Indies. Operation, amputation of second phalanx of middle finger, of the left hand. A drachm of chloroform was administered. She coughed a little, scarcely a drop of blood escaped, but she never breathed again. Artificial respiration and other means were employed in vain. No post-mortem examination.

Case 7.—Read before the Academy of Medicine, July 11th, 1848. A man named Daniel Schlyg, corpulent, was wounded in the previous month by a bullet, which fractured the femur, so that it was necessary to amputate at the hip-joint. Chloroform was administered by means of an apparatus. At the end of three or four minutes some convulsive movements occurred; the excitement was soon followed by relaxation and stupor. The operation was commenced, very little blood was lost, and consciousness beginning to return, the chloroform was re-applied. In a few seconds the countenance became pale and the lips discoloured, the pupils dilated, and the eyes turned up. The operation was suspended, and every means employed to restore life, but in vain. There was no autopsy. M. Robert was of opinion that the death took place from syncope.[*]

Cases 8, 9, 10.—(M. Malgaigne.) One of the wounded of June, having had the humerus broken by a ball; gangrene of the wound; disarticulation of the shoulder-joint; death during the last incision.—Case at the Hôtel Dieu, of Lyons: Charles Desnoyers, aged twenty-two, of scrofulous habit; white swellings of the left wrist; chloroformization, with an apparatus, for five minutes; transcurrent cauterization of the joint; death at the commencement of the operation.—Example pointed out by M. Guérin, as having taken place at the Bicêtre in September, 1848: patient chloroformed; disarticulation at the hip-joint; death before the end of the operation.

Case 11, at Govan: a young gentleman arrived from Australia. (See *Medical Gazette* for Jan. 5th, 1849.) Death took place during chloroformization for the removal of a great toe nail. No satisfactory account.

Case 12—that of Mr. Badger. According to the statement of the brother of the deceased at the inquest, Mr. W. T. Badger, aged twenty-two, was a healthy, muscular young man. After running, and taking violent exercise, he was apt to be somewhat out of breath, "like other people," but had no habitual difficulty of breathing, and was not subject to fits of any kind. On the 30th of June, 1848, Mr. Robinson administered chloroform, preparatory to removing some stumps of teeth. About a drachm and a half of chloroform were put on the spunge of an inhaler, which was held a little distance from the mouth. He said it was not strong enough—"Make it stronger." Mr. Robinson then asked a girl for the bottle containing the chloroform; but before he could take it from her to apply more to the sponge, the head and hand of the deceased gentleman dropped. All efforts at resuscitation proved unavailing. The face was livid, the pupils were dilated, and the temperature of the body lower than natural. The chief morbid appearances were—slight congestion of the lungs, thinness of the walls of the heart, and fatty deposition, disease of the valves, and great enlargement of the liver.

There has been some doubt thrown upon the cause of death in this case, owing to the undoubted existence of heart and liver disease. But there is nothing to show that this young man, apparently in perfect health, might not have gone on long without a sudden termination to his life, had it not been for the chloroform.

About this time occurred the death of a Mr. Carruthers, a gentleman of fortune in Scotland, from the incautious use of chloroform as an intoxicating agent. One night he was found dead.

Case 13.—J. Griffith, a seaman, admitted into a New York infirmary, in December, 1848, for chancres and hæmorrhoids. Chloroform was first administered to examine the condition of the rectum. He recovered, and on the 19th of January was again subjected to its influence, for the purpose of performing circumcision, and the removal of two external tumours of the rectum and tying one internal, by Mr. Gurdon Buck. He was at first excited, but became tranquil, and the operation on the rectum was performed. "At this moment my attention was arrested by my assistant calling for a wet towel. On examining the patient, I found his head and neck of a livid, leaden hue, the eyes turned upwards." Pulse imperceptible at wrist, and the whole body relaxed. After two or three gasps, he ceased to breathe. Every means were used, without effect. The chief appearances were: Lungs everywhere a good deal congested, and discharged, when cut, a large quantity of bloody serum. The heart was large; its ventricles and auricles were empty; its condition flabby; the substance of the left ventricle rather thinner than natural. About half an ounce of watery fluid was found in the pericardium.

Case 14.—J. Verrier, aged seventeen, of lymphatic temperament, but apparently good constitution, was operated on by M. Barrier of Lyons, on the 14th January, 1849, for necrosis of the first phalanx of the middle finger of the right hand. In five minutes, from a drachm to a drachm and a half of chloroform had been administered on a handkerchief. He was then completely chloroformed. The pulse was regular and of normal strength. The operation was performed. He raised his body, and struggled violently. In a quarter of a minute afterwards the pulse had ceased to beat, and there was no respiration. The handkerchief was removed. External stimulants and artificial respiration were employed in vain. The heart was found flaccid and empty; the lungs throughout black and engorged; blood everywhere fluid and dark. M. Barrier ascribed death to syncope.

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[*] I find the following strange paragraph in the "Revue Médicale," for 1848, p. 558:—

"Death by Chloroform.—A young female, daughter of a baker of New York, having had recourse to chloroform in order to have a tooth removed without pain, could not recover from the torpor into which this inhalation plunged her. She was buried for dead. Some days afterwards, doubts having been raised, the coffin was opened, and it was discovered, with horror, that this unfortunate had been buried alive."—*Herald of New York*.

CASE 15.—A mason's labourer, aged thirty-six, was operated on by Mr. Brown, of the Western Dispensary at Westminster, on the 14th of February, 1849, for gangrene of the toe, caused by a wheel having passed over it. Half an ounce of chloroform was put on a handkerchief, and held over the mouth and nose, care having previously been taken to ascertain the non-existence of thoracic disease. This quantity, however, failed to produce any effect, except excitement and struggling, and a man was sent for more. He was absent about two hours, during which the patient quite recovered. Half an ounce more was then exhibited in a similar way, care being taken to allow the introduction of air at short intervals. After a period of excitement, lasting two or three minutes, insensibility was produced, and the operation was proceeded with, and lasted about two minutes. Little or no blood was lost. At its close, pallor spread over the body, the features assumed a ghastly expression, and respiration and circulation ceased. Brandy was poured down the throat (notwithstanding Professor Simpson's opinion of the cause of death in Hannah Greener), hot bottles applied to the feet, and the cold affusion and artificial respiration employed. The post-mortem was not made till two days afterwards. On examining the chest, "the lungs were found of large size, not collapsed, of a dark venous hue throughout, and full of blood, a large quantity of blood escaping from them when cut into; they were, however, everywhere, crepitant, and free from disease, save a few carbonaceous spots. On opening up the trachea and bronchi, the mucous membrane presented a very congested appearance, being of the colour of dark port wine. This depth of colour was more remarkable in the smaller divisions of the bronchi. The bronchi also contained a small quantity of frothy mucus, slightly tinged with blood. The heart was rather large, but flabby, and its walls collapsed...... The auricles were empty; the right ventricle contained about an ounce of semi-fluid blood, and about an equal quantity of similar and venous-coloured blood was found in the left ventricle, but without a trace of a fibrinous clot." These were the chief appearances bearing on the cause of death. At the inquest, the jury returned a verdict "that the deceased, Samuel Bennett, died of chloroform properly administered."

CASE 16.—This occurred at Langres, in France, on the 25th of February, 1849. Madame Labrune, aged thirty-three, mother of a family, appeared full of life, but somewhat nervous and excitable. Had been several times etherized for the extraction of teeth. M. Confevron, on this occasion, was called in by a dentist to administer chloroform for the same purpose. He placed on the handkerchief of the patient a piece of cotton as big as a nut, saturated with less than a gramme (15·434 grains) of chloroform. After a few inspirations, the effect appeared to be produced, and M. Confevron told the dentist that he might go on, but the patient indicated by signs her wish to breathe more. After four or five deep inspirations, she fell back; the handkerchief was then thrown aside. The face was pale, lips discoloured, features altered, eyes turned up, pupils dilated; there was no pulse, and the limbs were relaxed. Means were in vain employed to restore animation. On inspecting the body, the brain was found to be congested, and its membranes gorged with black fluid blood. The lungs were of a greyish hue, sprinkled with red. M. Confevron concludes that the appearances were those of asphyxia; and adds that, in his opinion, chloroform should not be used, except in serious cases.

CASE 17 is that which happened in the practice of Mr. Solly, at St. Thomas's Hospital:—John S——, aged forty-eight, a porter, of active habits, but intemperate, apparently in excellent health, was admitted, for onychia of the left great toe, on the 9th of October, 1849. On the 10th, at a quarter to two P.M., he began to inhale chloroform from an inhaler containing a drachm. There was no effect for about two minutes. He then became excited, when the inhaler was removed, and about ten drops were added. He then, almost immediately, became insensible, and the nail was removed. The patient remained insensible, the face became dark, pulse small and quick, but regular, and the respiration laborious; his neckerchief was removed, and the chest exposed to fresh air from a window near; cold water was dashed on the face, the chest rubbed, and ammonia applied to the nose. He struggled for about a minute, and then became quite still. The skin cold, pulse scarcely perceptible, and soon ceased along with the respiration. He died in about five minutes from the commencement of the inhalation. No post-mortem examination.

CASES 18, 19, 20.—A Welsh girl, who died at Shrewsbury; the intended operation was the removal of an eyeball, but no operation was performed. Only a small quantity of chloroform was used. Death as if from apoplexy.—A boy of twelve years, chloroformed at Madrid for an amputation of the leg. Death during the operation, after a violent tetanic spasm.—A case in the Hôtel Dieu, under M. Roux: a woman affected with cancer of the breast. Chloroformization and removal of the breast. Death before quitting the amphitheatre.

CASE 21 occurred at Berlin. A young lady of twenty years of age, of good constitution, was chloroformed for the removal of a tooth. Only a few drops of chloroform was used at a time. Five unsuccessful attempts were made to extract the tooth—three, in the morning at nine; and two, about 2 P.M. At the commencement of the last attempt, she suddenly dies, stretching herself out, and frothing at the mouth, the countenance becoming livid. At the post-mortem examination, fifty hours afterwards, when putrefaction had set in, the heart was soft, flabby, and collapsed.

No. IV.

Fatal Cases of Chloroform Poisoning (continued).

Case 22 occurred at the public hospital at Kingston, Jamaica, January 29th, 1850. W. Bryan, age not stated, had to undergo the operation of amputation of the penis for cancer. Mr. Maggarth, who administered the chloroform, states: "I had about a drachm poured on a sponge, and applied it over his mouth and nostrils, but at first not in close contact. At no period was the atmospheric air totally excluded. The patient bore it badly, and I was frequently obliged to withdraw it to facilitate the breathing. The stage of excitement which is general came on, and he struggled and kept away the sponge for some seconds. It was again supplied, when, after a few more seconds, observing that he had made a stertorous respiration, I removed it altogether. He then ceased to breathe, but after some seconds had elapsed, he made another respiration, and this occurred several times, till at length respiration entirely ceased." Every means of recovery were employed. The brain and its membranes were congested; the right side of the heart contained dark, fluid blood, and the inner side of its left cavities, and the aorta, were stained with blood. There was some disease of the aortic valves; and the heart had undergone some amount of fatty degeneration. The lungs were much congested, especially posteriorly.

Case 23—at the Mauritius, February, 1850. An artilleryman, aged twenty-four, who was chloroformed for the removal of the last phalanx of the middle finger. A drachm of chloroform was used. Death took place almost immediately, as from syncope. Lungs emphysematous. Both cavities of the heart full of black, fluid blood.

Case 24.—A man, aged thirty, affected with hydrocele. Hospital, Stockholm. Two drachms and a half of chloroform were administered on a sponge in a towel, rolled up as a cone. After a few inspirations, rigidity and struggling came on. These subsided, but soon came on more strongly than before, and the towel was withdrawn. The patient not being sufficiently insensible, it was reapplied, when, after a few inspirations, the pulse suddenly ceased, the face and the whole surface of the body became pale, the eyes rolled upwards and inwards, and the breathing became very slow, but full and deep, the intervals between the inspirations becoming longer until they ceased entirely. The man died before the operation was begun, and within five minutes from the commencement of the inhalation. All means of resuscitation were tried. Chief appearances: the right side of the heart and great veins full of dark, fluid blood; the lungs, posteriorly, highly engorged, and exhibiting appearances like pulmonary apoplexy.

Case 25 occurred at Glasgow, March, 1850. A boy of seven or eight years was chloroformed before the operation for calculus. The chloroform was administered on a piece of lint. Death before the operation. No post-mortem examination.

I shall now give the ensuing cases in a more summary manner:—

Case 26.—A police constable at Guy's Hospital, June, 1850. Removal of a portion of hand. After inhalation from a machine without effect, a napkin was used. The operation lasted one minute and a half, and he was dead before it was over. Great congestion of lungs.

Case 27 occurred at Cavan Infirmary, in Ireland, September 20th, 1850. A man aged twenty-nine, chloroformed for amputation below the knee. The chloroform was on lint in a sponge; a drachm and a half were given. Death in less than a minute. No post-mortem.

Case 28.—A man, of uncertain age, in Stepney Workhouse, April, 1851.

Case 29.—At Strasbourg, June 20th, 1851. A woman, aged thirty-six; tooth-drawing. Lungs greatly congested.

Case 30.—At the Seaman's Hospital, Greenwich. A mulatto, aged forty-five, died under the operation of removing right testicle. About seventy minims were administered. A handkerchief was used. Much congestion of the brain and lungs.

Case 31 happened at Chipping Norton. A woman aged thirty-seven. Here ten drachms and a half were inhaled during eight minutes to save the pain of removing impacted fæces. There was no inspection.

Case 32.—Under Mr. Lloyd in St. Bartholomew's Hospital.. Thomas H——, aged twenty-three. An aneurism by anastomosis, occupying nearly the whole of the right ear, and the soft parts before and behind it. It was determined to try to effect a cure, first by tying the arterial branches communicating with the mass, and then by pressure applied successively to different parts. The operation lasted a long time, and the patient was placed under chloroform for half an hour. This was on the 14th of March, 1852. He recovered favourably; but it was deemed necessary to repeat the operation on the 17th. In between five and six minutes the effect was produced; but hardly had Mr. Lloyd cut the skin when the pulse suddenly ceased. All means of revival were tried, and the respiration did return for a short time, but at length he died. The chief appearances were distension of the right side of the heart and large veins with dark fluid blood. The lungs were collapsed, and not congested; but the mucous membrane of the trachea and large bronchi was greatly gorged with dark blood. There was old cerebral disease, but no recent lesion.

Case 33—at Ulm, June 27th, 1852. A woman aged thirty-two; operation, tooth-drawing; almost instant death. Lungs congested.

Case 34 occurred at Australia. A man, age not stated. Operation, fistula. About a drachm was administered. Almost instant death. The heart was found diseased, and he had been very intemperate.

Case 35—at Manchester; a factory operative. He was operated on for a malignant tumour of the right thigh, December 16th, 1852. He became insensible in about seven minutes. The operation had hardly commenced, when he gave a strong gasp and expired. "The autopsy showed that asphyxia, produced by the chloroform, was the cause of death. There was congestion both of the brain and lungs." Verdict, "Died from the effects of chloroform."

Case 36—in University College Hospital, March 19th. A woman, aged twenty-three, was chloroformed to prevent the pain of the application of nitric acid to sloughing sores of the labia and vagina. A drachm of chloroform was administered on lint. After a little excitement she expired. There was fatty disease of the heart.

Case 37—at the Hôtel Dieu of Orleans. A soldier, aged twenty-five, had about a gramme of chloroform administered on a sponge, and then, as no effect was produced, four drachms. He became insensible, and the operation (removal of a small tumour of the lip) was proceeded with. Instant death took place. Great congestion of the lungs; heart excessively flaccid, with some soft clots in right cavities. The surgeon under whose care the case occurred, M. Vallt, says: "Death is preceded by symptoms resembling those of asphyxia, when first respiration, and then circulation, cease."

Case 38—in the Edinburgh Infirmary, October 28th. A man aged forty-three, on whom Mr. Dunsmure was about to operate for stricture of the urethra by perineal section. About an ounce of chloroform was used. He died almost immediately, after a convulsion like an epileptic fit. No particular morbid appearance noted.

Case 39—in University College Hospital. Death previous to an operation for hernia, under Mr. Quain, Oct. 7th, 1853: a woman aged forty. A drachm and about forty minims of chloroform were applied on lint. After much struggling and stertorous breathing, the pulse suddenly ceased. Various attempts at recovery were made. There was fatty heart.

Case 40—at St. Bartholomew's, October 20th, under Mr. Paget's care. Operation, cauterization of a cancroid sore on the vagina of a woman of loose habits, aged twenty-two. An inhaler was used, with a sponge. About a drachm and a half supposed to be inhaled. In about five minutes, when Mr. Paget was about to commence, she was found to be pulseless, and the face turgid and congested. Almost the sole morbid appearance was the darkness and fluidity of the blood.

Case 41 occurred at Vienna. A girl of thirteen, operated on for lipoma. Sudden death almost before the skin was touched.

Case 42—at the Bristol Infirmary, on January 24th, 1854. A woman, aged fifty-nine. Chloroform was administered on a sponge, to more easily reduce a dislocation of the humerus. Only a drachm was used. Death in five minutes. Lungs gorged with dark, fluid blood.

Case 43.—Hôpital St. Antoine, Paris, spring of 1854; a woman, aged forty. Operation, removal of a uterine polypus. Death in about two minutes. All the organs healthy, but the right side of the heart gorged with dark fluid blood.

Case 44—at Sheffield; a middle-aged lady, for cancer of the left breast. More than an ounce used; death in about twenty minutes. Lungs congested.

Case 45.—Lock Hospital, London; a youth of eighteen; chloroformed for an operation on the prepuce, May, 1854. Two drachms were used, from an inhaler; sudden death in six minutes. Congestion of brain and lungs; fluidity of blood.

Case 46.—Middlesex Hospital, July 24, 1854; a stout man, of sixty-five; chloroformed for amputation of thigh. Snow's inhaler used, and three or four drachms given. Death in thirteen or fourteen minutes. Heart fatty; blood coagulated in the heart.

Case 47—at the Royal Ophthalmic Hospital, April 10th, 1855. Snow's inhaler used; inhalation before removing an eyeball. Death in a few minutes. Lungs congested; blood everywhere fluid.

Case 48.—A lady, aged twenty-nine; September 8th, 1855; died suddenly while inhaling chloroform from a handkerchief, under the care of Mr. Roberts, a dentist of Edinburgh, for alleviation of the pain of toothache. There was no autopsy.

Case 49.—A sailor, aged thirty, at St. Thomas's Hospital; chloroformed for the removal of diseased bone from a finger. A sponge was used, and a drachm given. Death after a kind of epileptic fit. Fatty degeneration of heart.

Case 50 occurred in the private practice of Mr. Paget. The operation was for removal of a tumour of the scapula; the patient, a boy of nine years. An inhaler was used; death in about sixteen minutes. No post-mortem. (Feb. 28th, 1857.)

Case 51—at Liverpool, April 5th, 1857; a labourer, aged thirty-five; chloroform given on lint. Death before the operation. Lungs healthy; right side of heart contained fluid blood.

Case 52—at King's College Hospital, August 7th, 1857; a girl of seventeen, chloroformed for removal of syphilitic warts and ulcers. Snow's inhaler was used. She had hardly been touched with nitric acid when she died. The lungs were healthy, only slightly congested.

[I find I have left out at least one recorded case. A Mr. Martin died, near Melrose, August 10th, 1852, during the influence of chloroform while undergoing an operation for the application of caustic potass to some ulcers of the leg. There was also a case at Leeds, where chloroform was repeatedly used during an attack of delirium tremens, and where it seems doubtful whether the chloroform or the disease was most the cause of death.]

So far Dr. Snow, who gives only fifty cases.

Recent deaths.—As the best short summary of the more recent cases, I extract the following observations from Dr. Richardson's Report on Forensic Medicine and Toxicology, in the number of the *British and Foreign Medico-Chirurgical Review* for October last. He says:—"Three deaths have recently occurred from chloroform—one in Paris, two in England; and one is reported in America, which happened in 1856. The accident in Paris happened to a soldier of the Imperial Guard, on the 27th of May, 1858, in the military hospital. The patient was a strong man, and apparently of sound constitution. The intended operation was the removal of the testis. Chloroform was inhaled from a folded compress containing lint, and for a time the inhalation proceeded regularly. After two or three minutes, signs of consciousness to pain being still present, the chloroform was continued, when the patient suddenly sat up, threw up his arms, every feature of his countenance expressing suffocation, and immediately he fell back lifeless . . . Both lungs were tubercular; and in the right lung there was a large cavity." The cases in England occurred—one at Epsom, on August 27th, 1858; the intended operation was tooth extraction: the other at Towcester. The first has not yet been correctly reported; but the patient, a young woman, breathed the chloroform from a napkin, and the death was sudden. The second case will be found described at some length by a contemporary, of September 11th, 1858. Mr. Watkins administered the chloroform from a cotton handkerchief, for the purpose of examining an injured toe of a boy. The patient for a time resisted the chloroform, but seemed ultimately to come kindly under its influence. Mr. Watkins was now about to examine the toe, when the patient gave one or two stertorous inspirations. The narcotic was then removed, but the change was apparent; the lips became livid, the pulse fell, and life was extinct. In the American case, as in that of Mr. Watkins, the chloroform was given to the patient, a soldier, to examine an injury. Tincture of chloroform, composed of one part of chloroform and two of absolute alcohol, was used, and the inhalation was from a bell-glass. The patient had fatty disease of the heart. Another case occurred at the Ophthalmic Hospital, Moorfields, on the first of this month. The patient, a boy of eight years, was operated on for strabismus. Chloroform was inhaled from lint. In about three minutes, just when the operation was commenced, he seemed to have died. Of course all the usual means of resuscitation were employed in vain. He gasped several times during the first twenty minutes of artificial respiration. The chief appearances bearing on the cause of death were intense congestion of the lungs, and some congestion of the membranes of the brain.

Besides these cases, amounting to fifty-seven, there are notices of various fatal cases incidentally given, for which I must refer to the work of Dr. Snow. I believe that there are not less than 100 cases of death by chloroform. An American physician informed Dr. Snow that he knew of three cases of unrecorded deaths in one hospital. There has been very lately a private case in the practice of Mr. Lawrence. Several cases are believed to have taken place in Scotland, where there is less publicity given to such matters than in England, from the want of the institution of the office of coroner.

The important question remains as to the causes of death in these cases, and whether other anæsthetic agents can be substituted for chloroform. We must remember the countless cases in which chloroform has been used. My own opinion is, that the chloroform kills in more ways than one, and that nothing can enable us to entirely avoid the occasional occurrence of a fatal accident. I shall commence my next paper by endeavouring to point out that it kills in three ways—first, by arresting the pulmonary circulation at the capillaries, causing sudden engorgement of the lungs and suffocation; secondly, by paralysing the heart, and causing syncope; and thirdly, by its action on the brain and nervous centres, destroying the integrity of the nervous system.

ON SYNOVIAL TUMOURS IN THE NEIGHBOURHOOD OF JOINTS.

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Few surgical diseases have been so little studied, and, therefore, few have so obscure a pathology, as those cystic tumours which occur chiefly about the hand and foot, and which are known under the name of "ganglion." If we examine into the descriptions of these swellings given by various authors in systematic works on Surgery, we shall find that their accounts differ in an extraordinary degree, and that they are often false and generally inadequate. Thus Chelius (South's translation, p. 699) describes them as "round, of slow growth, rarely exceeding the size of a pigeon's egg, and in general consisting of thick-walled cavities developed in the neighbourhood of joints and sheaths. Miller, p. 546, says, "the cyst is thin and transparent." Cooper ("Dictionary," art. Ganglion) speaks of "an encysted, circumscribed swelling;" while Syme, "Medico-Chirurgical Transactions," describes under that name, one of those non-encysted tumours which occasionally occur in the palm of the hand and wrist. Again, Chelius especially mentions "little, white, cartilaginous bodies," as a constant part of their contents, while most do not mention such bodies at all.

Where such wide discrepancies in the description of the broad general characteristics of a disease exist, it is certain that the writers are treating of different maladies under one name. The term "ganglion" has acquired a popular sense, and has been applied so broadly that it has lost the precision of meaning which alone stamps value on a scientific term; we will therefore omit it altogether for the present, and endeavour to trace the origin of the different synovial cysts which occur about joints; and first of those round hard tumours, such as Chelius describes.

It is necessary, at the very commencement, to deny what many have stated—that such tumours are usually new formations, produced by the establishment, through friction, of a bursa, which gradually increases until it becomes a tumour. It is well known that friction upon the skin will often produce a bursa, but not without thickening of the skin itself, and it is just at the back of the wrist, where these tumours are most frequent, that the skin is thinner than in any other part of the hand. Moreover, there exist normally from fifteen to twenty small bursæ about the hand, but not one of these is at the back of the wrist; they are placed chiefly over the prominent heads of bones, in situations where I do not remember ever to have observed a synovial tumour, or to have seen one described. The fact is, that the membrane which forms the wall of these tumours is borrowed from some normal synovial membrane in the neighbourhood, and it is on account of the great abundance of such tissue about the carpus and tarsus—viz., on sheaths of tendons and multitudinous joints, that such swellings are peculiarly common in these situations. Cruveilhier was perfectly aware of this fact, for he says, in the third volume of his "Anatomie Pathologique," (p. 455), "I shall divide synovial cysts into two categories—*a*, into periarticular; *b*, into peritendinous cysts." Reinhardt, a German writer of high eminence and remarkable precision, observes, in the art. Ganglion, of the "Medezinische Chirurgische Encyklopædie:" "It was soon made out that they must belong to the bursæ and synovial sacs of joints and sheaths of tendons." Other writers hold the same opinion with regard, at least, to the synovial sheaths, but it is strange that no English author amongst the many whom I have consulted mentions their connexion with joints, although it is perhaps more common than the tendinous origin.

The point to be now more especially examined is the mode whereby such can be formed from a normal synovial membrane. In every such sac there must exist a certain position of parts in which the least space is given for its contents, and in which, therefore, such contents press upon the free and reflected portions of the membrane. Thus, if the sac belong to a joint placed in such a position, the fluid will be forced from between the articular surfaces against the free portion of membrane which unites the bones, pressing it with more than usual force against the restraining ligament, until some part of it, being weaker than the rest, or being opposite a little mesh or cranny between the fibres of the ligament, becomes stretched and pushed back, either into the subsynovial tissue, or into such a ligamentous lacuna itself. The same thing may, of course, be said, *mutato nomine*, for tendinous sheaths. The joints in which such actions are most likely to take place are those having large articulating surfaces and small reflected portions, which act as *diverticula*. When such a knuckle of membrane has, as above described, been pushed out, it withdraws itself more and more, until it forms a cup which constantly secretes fluid and receives fluid from the general cavity, till it becomes distended into a globular excrescence or hernia from the synovial membrane. This protrusion is at first very minute, not so large, perhaps, by half, as the head of a pin, and it may remain always of this size, having still a small communication with the synovial sac, and appearing simply as a little addition thereto. Such appendages have been found connected with various joints, the knee, the shoulder, &c., but above all with the carpus. I have also found them at the astragalo-scaphoid. They have been described as normal structures; M. Gosselin, of the Hôpital Cochin, at Paris, draws particular attention to them, and gives them the long name of synoviparous crypts, describes them as destined to increase the amount of secreting surface, and as occurring not only in man but in animals also. He went to the abattoirs of Paris, and there examined the carpal and tarsal joints of a good many horses, and found synoviparous cysts in them. Yet, in spite of all this evidence, I do not believe that the normal condition is the existence of these sacs: because the physiological reason given for their presence is inadequate. Let us consider, for instance, the synovial membrane of the carpal joints, which is so extensive that it lubricates not only the joint between the two carpal rows, but the junction between each pair of bones, and the four inner carpo-metacarpal articulations as well. I say, when we consider the size of this membrane, and the extent of its secretory surface, we shall not readily believe that it can be materially assisted by five or six follicles not so big as pins' heads. Then, again, I have examined many carpal joints, and must acknowledge that, if we take our subjects from the dissecting-room or hospital dead-house, we shall in all probability find synoviparous glands. Such persons are usually somewhat beyond middle age, and have led a hard working life, but if we take our examples from the hands of children, no such structures will be found. The hands of ladies, who have in their lives done nothing severer than worsted work, come seldom under examination, but in one that I had the opportunity of dissecting, I found no synoviparous crypts, although I studied the whole membrane with a glass. Again, there is a class of women whose mode of life and poverty combined often bring them to the hospital, although their hands are free from the signs of labour; in these, synoviparous follicles are absent. Lastly, they are more common on the right hand than on the left. Indeed we may take the condition of the skin of the hand to represent the probability or improbability of there being any such excrescences; therefore they are, I believe, abnormal, the result of hard work and straining of the joints, and they occur in the place where we should expect such results to appear—namely, chiefly at the carpus, where the whole secreting surface is very large, and where the portions reflected from one bone to another (which act as diverticula) are small. Moreover, when, from certain positions of the joint, the fluid becomes forced into that space, and presses against the synovial membrane, it must take most effect upon that portion of membrane which is least supported by ligament; and this is just at the angle of reflection, where the membrane leaves the bone. It is at that spot, therefore, that we should expect to find most frequently the results of over-exertion, and it is here that we really do most frequently find synoviparous crypts. As for the animals which M. Gosselin examined, it must be remembered that they were omnibus and fiacre horses, who, after a life of severe labour, had been condemned by the knacker, and therefore creatures on whose joints we should expect to find the results of overwork, as M. Legouest has observed.

The little processes, then, which are found projecting from synovial membranes are not physiological, but pathological formations, produced by a pressure from within, as previously described. They are at first almost microscopic, and may be best seen by examining the inner surface of the membrane, on which (causing it to protrude) they create a slight swelling, generally with an orifice in its centre. One of these excrescences, which shall have passed into a mesh of the ligament, may increase considerably until it protrude through it, forming a tumour on its outer surface. The channel of communication with the original sac may still remain open, or it may have closed, leaving only an imperforate cord passing through the ligament and connecting the cyst with the synovial membrane; or, lastly, even this cord may have disappeared, so that all means of tracing the origin of the cyst be lost, and it appear like a new formation. In a hand which I dissected during the last winter I found on the first phalanx of the ring-finger an oval tumour, not so large as a horse-bean, the long axis of which corresponded to that of the finger. It was of an amber colour, and adherent by a small point to the fibrous sheath. I removed the sheath with, of course, its lining of synovial membrane, and found, on looking at its inner side, a small opening through which a bristle could be passed, whereby it was shown to communicate with the interior of the tumour. I endeavoured to preserve these parts in spirit, but the semi-fluid contents of the cyst were soon dissolved; in endeavouring to pass a bristle through the narrow opening to act as a spring in the tumour and distend its walls, I unfortunately used a little too much force, and broke it away. This hand had belonged to a coachman, and bore many signs of rough work. The palmar fascia was in one part scarred and contracted into a thickened cord, which prevented straightening of the middle finger; and there were three synoviparous follicles at the base of the os magnum. In hands of this sort, cysts as above described are not very rare. I have seen one on the sheath common to the extensor ossis metacarpi and extensor secundi internodii pollicis. This was bilobular and very tense; the peduncle connecting it to the above-named sheath was very thin and imperforate. I have also seen one at the back of the carpal bones, connected by a stalk to the joint between the scaphoid semilunar and os magnum. I have seen one lying unconnected at this spot. In fact, any one who carefully examines a number of hands will be sure to find such tumours in different stages of progress, from the first simple bulging of the synovial membrane to the cyst lying free amongst the tendons and upon the ligaments, which increases like other cysts by virtue of its own secretion, whilst its walls become thickened by a fibrous layer, either derived from the structures through which the tumour has passed, or acquired by the constant friction to which its prominence exposes it, until the cyst becomes hard, round, and elastic, rather than fluctuating.

Having now traced the origin of such tumours from the beginning, we may impose thereon a definite name, and will return to the old word "ganglion," only we will limit its application strictly to this form of malady,—namely, to synovial cysts produced by nipping out, as it were, a piece of synovial membrane from joint or sheath while the rest of that membrane remains normal; and we will not allow it to be misapplied (as is often done) to dropsies of synovial sheath, whose course and history we will next follow.

Every one is acquainted with the disease called dropsy of a synovial membrane. In the particular form called hydrops articuli, when a joint becomes filled with fluid, and bulges out wherever not bound down by ligament or tendon, such disease is easily recognised. The same occurs not unfrequently in the sheaths of tendons, when, after the acute stage of a tendinous sprain, the sheath remains for some time distended with fluid and fluctuating. Such cases are still in an acute or subacute form; but there exists a more chronic condition, the commencement of which may be so little marked, and the secretion of fluid so gradual, that the case does not come under surgical treatment till the bulk itself of the swelling produces inconvenience. It will then show a fluctuating soft tumour, whose shape varies with the sheath affected, but which is nearly always lobulated; its walls are so thin, that it is always more or less diaphanous, according to the depth of the malady from the surface and the state of its contents. The disease usually takes its origin in an affection which M. Velpeau, I believe, first described under the name of "*Aï ou crepitation douloureuse des tendons.*" Painful crepitation of the tendons occurs generally at the wrist and hand, less often at the foot, and rarely at any other part of the body; it may be the result of external injury, more frequently of violent and repeated exertion. In its worst and most acute form it produces a wearing and somewhat intense pain, which continues even while the limb is at rest, a slight swelling varying in size and shape, according to the particular sheath affected; external redness is rarely present. In its slighter forms, swelling is hardly appreciable; the pain is considerable, and only felt when the limb is moved. The one constant accompaniment of the malady is crepitation, sometimes so marked that the case has been taken for fracture, and sometimes very slight. The affection generally ceases either of itself or from treatment; but after an uncertain interval there will sometimes commence a gradual effusion into the sheath of the tendon —a true dropsy thereof, which is distinguished from ganglion by its affecting the whole sheath, instead of only a portion of it. Such dropsies present sacculated, soft, diaphanous, thin-walled, and fluctuating swellings, which usually occur at the wrist and ankle, and whose form varies with the shape of the sheath; thus on the sheath of the tendons of the short extensor of the toes the tumour is bilobed and bifurcated, or even trifurcated; towards the toes in the sheath common to the radial extensors of the wrist it is also bifurcated. In certain others the swelling is long and fusiform. Their lobulation depends, on the other hand, not upon the original shape of the synovial sac, but upon the position and resisting force of the surrounding fibrous sheaths and fasciæ. One of the most remarkable and important peculiarities of these tumours is, that they frequently contain little loose bodies of various size. In the museum of the College of Surgeons may be found eight little jars, numbered 369 to 376 inclusive, each containing a great number of such bodies, which are described in the Catalogue as from *ganglia*, and which vary in size from that of a small pin's head to that of half a pea, the larger dimensions being the more rare. The existence of such loose bodies in distended synovial sheaths has been long known. Dupuytren considered them to give in some peculiar manner a lobulated form to the tumour in which they were developed, and he believed them to be hydatids; hence this form of swelling has been called from his two false theories, tumeur hydatiforme and tumeur en bissac. John Hunter first pointed out the mode in which the bodies were produced from the walls of the cavity, and Sir E. Home, in the first volume of the "Transactions of the Society for the Promotion of Medical and Surgical Knowledge," published in the year 1803 a further detailment of J. Hunter's views. In 1833, M. Velpeau, ignorant, no doubt, of the above writings, published in a "Thèse de Concours" a similar history of their development, and French surgeons have since appeared to regard him as the originator of that admirable theory.

The situation in which these seed-like bodies are most frequent is the front of the wrist; for, although they may and do occur occasionally mixed with the fluid in dropsy of any sheath, and even joint, yet, from some cause, they are so constantly found when the sheath of the flexor tendons of the fingers is thus affected, that they may be said to form a constant portion of such swellings. It is partly on account of these bodies that dropsy of this particular sac is a serious complaint, and partly, also, because the sac itself is so large, and so complicated in its folds, that any affection thereof is difficult of treatment.

I must here enter into certain anatomical details concerning the size, shape, and reflections of this sac; although I find that some German and French authors have already investigated this subject, and my dissections disclose nothing positively new, still, in certain points, I differ somewhat from all those authorities.

The methods I pursued in these dissections have been various, but the safest is the following. After removing the skin and superficial fascia from the forearm and palm of the hand, a little opening is to be made in the deep fascia at the wrist, through which a director may be passed under the annular ligament, between it and the median nerve; the ligament is then to be divided. Now, on lifting the cut ends of this structure, there will be found, running from them to the sides of the nerve, two fine webs. These are synovial membrane, and to follow the more easily its reflexions, a fine canula should be passed in, through which it may be injected with air, or, still better, with some coloured liquid, as indigo-and-water. It will very nearly always be found, that the fluid injected at the inner side of the nerve does not pass to the outer, and *vice versâ;* so that there are at least two sheaths. I will not, in this journal, where space is so valuable, trespass thereon by a detail of the steps of a dissection, most interesting to make, but tedious probably in description; suffice it to say, that there are rarely three, still more rarely but one, and generally two, synovial sheaths for all the flexor tendons of the fingers. The external and smaller of the two envelopes the tendon of the long flexor of the thumb, and extends from the lower edge of the radius to the end of the second phalanx of that limb; it also usually sends a process between the superficial and deep flexors of the index. The inner sheath is much larger, and lubricates all the flexors of the fingers. It extends from about half an inch above the annular ligament to the end of the metacarpal bone of the little finger, but sometimes is continued along the tendon to the distal end of the second phalanx. The measurement along its inner edge is longest; it does not extend nearly to the end of any other metacarpal bone, and gets shorter and shorter as we pass outward, and only touches the index tendons along the inner edge, beneath the annular ligament. In tracing its reflexions beneath the carpal arch, we will commence at the point where it was injected—where, namely, it is reflected from the annular ligament to the side of the median nerve. It runs from that point along the posterior edge of the ligament till it reaches its attachment to the unciform and pisiform bones; it then courses backward, and lines the anterior carpal ligament, as far as the joint between the scaphoid and semilunar bones, whence it is reflected to the inner edge of the deep index tendon, passes inwards along the posterior face of the deep tendons, and turns round that of the little finger, making thus one division of the sac between the carpal ligament and tendons of the flexor profundus. In the same way, running outwards and inwards again, it forms another double fold between the two sets of tendons. Turning at the superficial flexor of the little finger, it passes outwards again in front of the superficial tendons towards the median nerve, joining itself at the part whence we first began to trace it. Thus the sac is divided into three divisions—a mode of distribution which may give rise to many important considerations in the surgery of this part. When an abnormal amount of fluid is developed in this part, it is prevented by the tonic action of the muscles from accumulating to any great extent in the two deeper cavities, but is forced into the superficial one. Hence a difficulty arises in treating the rare accident of suppuration of this sac; for though the superficial cavity may be emptied by incision, pus is still secreted by the deeper parts, finds its way into the palmar divisions of the membrane, and is frequently followed by the knife through the fascia, until the whole palm is laid bare. Such treatment has this grave inconvenience: that the fascia, in healing, retracts very considerably, dragging upon its lateral attachments to the phalanges, so that the patient can perhaps never afterwards straighten the fingers. These incisions and their ill effects can, in many instances, be avoided, as is shown by the following case:—

Mrs. G—— had sprained her hand by over-exertion very severely; and three weeks afterwards came to me at the Charing-Cross Hospital, in considerable pain. The hand was swollen, the fingers semi-flexed, and the slightest movement thereof, particularly of the three inner, caused pain; motion of the index was less painful, and the thumb could be flexed with very little inconvenience. There was a red, fluctuating tumour at the lower part of the wrist. By placing my fingers of one hand in the palm, the other at the swelling in the wrist, fluctuation between the two parts could be felt; and when the palm was pressed the tumour at the carpus could be seen to enlarge. The redness and attempt at pointing, led me to suspect the contained fluid to be pus. I incised the carpal swelling from the edge of the annular ligament upward, made a large and hard pad of tow enveloped in linen, bound it with great force in the palm, and placed the arm on a splint, with the wrist bent backwards, so as to obtain the greatest possible pressure from the flexor tendons. Three days afterwards, I saw her again: the discharge had been at first profuse, but was now diminished: she complained little of the position and pressure. The swelling in the palm had nearly disappeared. In a week I was able to use a smaller pad; and in a fortnight the discharge had ceased, and the wound was beginning to heal. I continued the pad and splint for three weeks; after which a bandage, with simply a few folds of lint in the palm, were substituted; and in a month she was able to return to her work, the hand perfectly restored. She took quinine during the treatment.

If instead of pus the fluid in the sac be the sero-synovia of dropsy, the course of the disease is milder, producing for a time only a difficulty and awkwardness in the movements of the hand, and a disturbance in the sensation of the palm. When the swelling has increased sufficiently to be visible, it is found divided into two, as in the above case, by the annular ligament; and if the surgeon place one hand on each portion of the tumour, he will feel not only fluctuation passing from one to the other, but also a peculiar crepitus, produced by the mutual friction of loose bodies in the sac as they course through its constricted part. These melon-seed bodies are developed in great numbers when certain sheaths become dropsical, and are rarely found in others. In the flexor sheaths generally they are more common than in extensors. The reason of these differences is probably that, from their mode of development, they are more likely to be produced, where the tendons have the greatest freedom of action.

I have now described minutely the differences between ganglion, properly so called, and dropsy of a synovial sheath; but it may be as well to give a short definition of each form of disease. Ganglion is a hernia-like protrusion from some part of a synovial sac, either joint or sheath, which may communicate, for an uncertain time, with the original cavity, but whose perfect state is to be cut off and separated therefrom. Dropsy of a synovial sheath is an affection of the whole sac, producing an accumulation of sero-synovia with which melon-seed bodies may or may not be mixed.

The importance of diagnosis lies simply in the choice and applicability of remedies; and I am sure we may ascribe much of the doubt and uncertainty in the treatment of all these disorders to the want of accuracy in their definition, and that when proper distinctions are drawn between their different forms, no such difficulty will be felt. Thus a ganglion, when fully developed, is an independent cyst; such a tumour may attain a considerable size, and come under treatment while still connected with the cavity whence it drew origin. Hence, in choosing a course of treatment which shall be at the same time efficacious and safe, it is highly important to determine, whether the pristine communication be open or not, because we may use on a cyst which has become independent much more powerful remedies than we could employ if the cyst still communicated with a joint, or even with a tendinous sheath. The difference of the two cases may be aptly compared to the difference between congenital and acquired hydrocele. The tunica vaginalis testis is borrowed from the peritoneum; if that tunic become filled with fluid while its cavity still communicates with the abdomen, who would use iodine injections? but if the communication be cut off, they are employed without danger.

The mode of distinguishing between a ganglion separated from its original connexion and its earlier condition, is by observing whether the tumour can be slowly reduced by pressure, and re-appear as slowly, when the pressure is removed. The reduction and re-appearance of the tumour must be very gradual; for if it suddenly vanish and come forth again as pressure is applied or withdrawn, the phenomena are not due to evacuation and refilling of the cyst, but to its reduction *en masse*, to its having slipped under some ligament or tendon in its neighbourhood. When it has thus been ascertained that the tumour is really independent, one of two distinct plans of treatment may be chosen. One, which is to procure the absorption of the fluid by the walls of the cyst itself; the other, which is founded upon artificial evacuation of the cyst. The former I have seen, in one or two instances, successful, when, after the use of counter-irritant and absorbent preparations, the cyst has entirely disappeared; but this is rare, and in general it is necessary to have recourse to the latter treatment. The old plan of striking a ganglion forcibly with the back of a book is barbarous in the extreme, and I have seen evil consequences follow its application. I use, to empty the cyst, a small tenotomy-knife, which I pass in at some distance from the tumour, whose walls I then divide subcutaneously as freely as their situation will allow (having occasionally cut the cyst, I believe, in half), and then apply a splint with considerable pressure over the site of the swelling. I entertain a very high opinion of this combination of rest with pressure, and never found any evil consequences arise from the incision when it was adopted. But sometimes this treatment seems insufficient, and the tumour will re-appear even repeatedly. In such cases I do not hesitate to use an injection of sulphate of zinc, never exceeding five grains to the ounce, and, after injecting, take care to press out, through the canula, as nearly as possible the same amount as was passed in; then apply the splint and pressure. It is only necessary to be quite certain that the cyst is independent.

The dropsy of a synovial sheath must be treated quite on a different plan. We do not want to produce adhesion, and, if we did, should probably fail; and very likely should produce injurious inflammation amongst the tendons if we ventured to irritate, and certainly to inject, such a tumour. Those small dropsies which occur about the back of the hand or foot scarcely require evacuation, unless they are very tense and of long standing. Slow counter-irritation, with iodine and mercury, and rest, &c., is often sufficient to procure their disappearance. When the disease, however, occurs in large sheaths of flexor tendons, as that in the palm of the hand, the case is more grave. Professor Syme has published, in the "Medico-Chirurgical Transactions," a case of this sort, in which he laid open the palm and wrist from end to end, dividing the palmar fascia and annular ligament. I have treated such cases less heroically, and with success; and although I should not venture to say such an incision never was necessary, yet it certainly need very rarely be resorted to in this disease.

Mrs. J. C—— came to me from a few miles out of town, with such a tumour, whose crepitation proved the presence of loose bodies. By manipulating this swelling carefully, I got as many of these bodies as possible into the upper swelling, then bound a large pad tightly into the palm, incised subcutaneously the upper tumour, and let its contents escape. For eight days the wound at the wrist continued to discharge a glairy fluid, then ceased to do so, and healed; but puffiness of the wrist continued for some weeks. I had expected to be obliged to incise the wrist when the wound in the bursa had healed, and to remove at least some of the loose cartilages; but the patient was afraid of the operation, and I was willing to wait upon Nature, yet was somewhat surprised to find the arm regain its perfect shape and mobility without further surgical assistance.

Many cases, showing the difference in diagnosis and treatment between the two forms of disease here spoken of, might be given; but enough probably has been said to establish the truth of this position.

Old Burlington-street, October, 1858.

COMPOUND FRACTURE OF SKULL, WITH DEPRESSION:

DEATH, ARISING FROM ABSCESS (DISTANT FROM THE FRACTURE), TWENTY-FOUR DAYS AFTER THE OPERATION OF TREPHINING, COMPLICATED WITH EPILEPSY.

By Frederick Robinson, M.D.,

BATTALION SURGEON, SCOTS FUSILEER GUARDS.

Private T. D——, aged twenty-two, a healthy young man, of sanguine temperament, was admitted into the battalion hospital, at Windsor, at half-past seven o'clock, A.M., Jan. 2, 1858. He was in a state of almost complete insensibility, only answering questions—evidently without properly comprehending them—when repeated often, and in a loud voice. He complained at times of pain in the head, but did not appear to experience it severely, for the features were placid, and he seemed to be a man enjoying tranquil sleep, there being no heaviness in breathing. Pupils full and insensible both to the action of light and touch; pulse quiet and compressible, and of normal strength and frequency.

On examining the right side of the head, a small, healthy wound (evidently the sequel of a large and recent one, which had cicatrized), was found over the parietal bone, near its centre and in a line with the ear. A little pus exuded on pressure of the adjacent integument, which was rather puffy, and on introducing a probe, the bone was felt, denuded of covering.

History.—On the morning of the 28th of December, whilst trying to separate two women who were fighting, in Whitechapel, he was struck from behind by a man armed with a hammer of small size, of the kind used by tinkers. He became insensible for a short time, but walked subsequently to an apothecary's shop, a quarter of a mile off, having apparently quite recovered from the consequences of the injury. His head was dressed with adhesive plaster, the hair being removed from the edges of the wound; but the latter, it seems, was not probed. He continued free from any symptoms or unfavourable consequences of the injury, and in this state of health returned to Windsor on the evening of the 29th, his furlough having been exceeded one day. As a customary proceeding, he was confined to the guard-room, and sent to be inspected at hospital the following morning, with a view to ascertain his capability of undergoing the slight punishment* (a short extra drill) usually ordered for such an offence. He complained, as soldiers very often do, after being drunk, of "soreness" in the head. His tongue was rather white, but no other symptoms of illness were present, and he was considered to be slightly affected with a deranged stomach, consequent on intemperance. A rhubarb draught was administered, and he returned to the barracks.

On January 1st, his punishment having been settled, he came to the hospital, and showed a small wound on the right side of the head, two inches above the ear, and which injury had been concealed by his foraging cap on the previous occasion. The wound looked quite healthy, and was nearly healed by adhesion. It was dressed, and no unfavourable symptoms being either apparent or complained of by the man, he was ordered to attend daily at the hospital until the cicatrization was complete. At half-past seven, A.M., the following morning, he was noticed by his comrades in the barrackroom to be listless and unwell, and he was consequently sent to hospital in a cab. At the time of arrival he was well enough to walk to his bed, but soon fell into a state of partial coma, rapidly becoming complete when seen by me soon afterwards. He had not been affected with vomiting or rigors at any time since the injury, or, until admission, complained of headache.

Treatment.—The symptoms detailed led me to lay open the seat of injury by crucial incisions, and these being made, through integument much thickened and vascular from recent deposition of lymph, a portion of bone as large as a thumb-nail was found fractured, an oval space of that size forming, apparently, the extent of the injured bone. The upper margin of the latter was so much depressed and firmly wedged in as to cause the edge of the uninjured cranium above to be visible to the extent of its entire calibre. Ordered, colchicum, eight grains, immediately, and a senna draught afterwards. The appearance of the fracture was readily explained by the form of the weapon used. A little pus was discharged when the incisions were made, and the small vessels bled very freely. A return in some measure to sensibility followed this operation, the pupils contracted a little, and at two o'clock (four hours after) he was sufficiently recovered to make a slow but coherent declaration to a magistrate of the manner in which the injury was inflicted. About an hour later he became again insensible, his breathing rather heavy, pupils dilated and scarcely acting at all under the influence of light. Pulse rather laboured. No paralysis of extremities evident.

At a consultation with my colleagues, Surgeon-major Bostock and Assistant-surgeon Kerin, Royal Horse-guards, it was determined to enlarge the wound and elevate the depressed bone, beneath which it was diagnosed pus would probably be found. This proceeding was immediately adopted, the whole of the depressed portion of bone being included in the somewhat larger area of the trephine. The external table I found unusually thin, and, when removed, the whole calibre of the bone measured but one-ninth of an inch in thickness. A small quantity of thick pus, when the depressed bone was extracted, issued from a laceration of the dura mater, corresponding with the impinged edge of the former. It was not apparent whether the brain had also sustained any injury to its substance. The congested vessels of the scalp bled freely, and the patient lost much blood. He bore the operation very well, his pulse kept of good volume, and he became intelligent and sensible of events passing around him. His bowels acted before he was operated on. Repeat calomel, eight grains. Eight P.M.: Doing well; bowels moved twice. Is now in perfect possession of his faculties. Pulse rather weak, but of normal frequency; pupils act tolerably well; no nausea; complains of thirst; tongue white, but not loaded. To have two grains of calomel every hour.

Jan. 3rd.—Slept about four hours: feels easy and complains only of thirst, evidently in part occasioned by incipient ptyalism. In endeavouring to expectorate the saliva, a slight depression of the left angle of the mouth is observable, and a little convulsive action of the muscles of the cheek of that side. Bowels acted thrice during the night; urine voided in good quantity. No pulsation evident beneath the bandage. Pupils act very well; pulse 84, a little feeble. Effervescing draught every second hour; calomel, two grains, three times a day. Has taken some tea.—Evening: Doing well in all respects, except that twice or thrice during the day he had a repetition of the spasmodic action of the left side of the face, lasting a few minutes each time, and occasioned by the same attempt to expel saliva. The tongue is also protruded rather more to the left side. No numbness of the face, and he speaks very clearly. Takes food well (sago and tea), and complains only of bad taste in the mouth (ptyalism).

4th.—Has had a restless night, and been frequently purged; voids urine with some difficulty. This morning, whilst endeavouring to free his mouth from saliva, there was strong convulsive action of the muscles of the left side of the mouth and face, with an occasional long, sobbing inspiration. The paroxysm only lasted a few minutes. Pulse rather weak, 76. Dislikes the sago, and wishes for broth. Ordered, mutton broth: mercury with chalk, eight grains; aromatic powder, eight grains: three times a day. Continue the effervescing mixture. The wound appears to be clearing a little at the edges, but at the trephined space is hidden from view by an ash-coloured surface, beneath which a slight pulsation is apparent. No appearance of pus accumulating within the aperture of the cranium. A little tolerably healthy discharge from the wound, the exit from which is kept as free as possible. A light poultice applied. —Evening, seven o'clock: Continued pretty well until twelve o'clock, when the convulsive action of the face came on whilst in the act of vomiting an effervescing draught. The symptoms lasted a few minutes, and presented complete insensibility, with frothing at the mouth, fixed and dilated pupils, lividity of face, and an extremely rapid and feeble pulse, followed by a return to consciousness, and freedom from paroxysm for about ten minutes. Several like attacks and intervals succeeded, the last and most severe continuing twenty minutes, and threatening a fatal issue. This seizure terminated about two o'clock; and since then he rallied, and is now as well apparently as in the morning. Has taken broth twice and some sago. Pulse 80, tolerably strong; bowels have not acted since the morning. Retains the powders, but vomits the draughts. To continue the powders every four hours.

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* His object seemed to be a not unusual one amongst soldiers—viz., to conceal any ailment from the surgeon until subsequent to the settlement of punishment by the commanding officer; then, to report themselves sick, as, if taken into hospital, they thereby escape a portion or the whole of the drill, &c., the period constituting which is reckoned—though the man be sick from his own misconduct—alike whether he is at hospital or on duty. In the present case, T——, to lessen his offence in the commanding officer's estimation of it, did not allude to the affray, and, for other contingent motives, did not call my attention to his injury.

5th.—Has had a good night, and complains only of thirst, which, in the absence of other pyrexial symptoms, must be attributed solely to the salivation existing. Less depression of the angle of the mouth, but there appears to be slight numbness and want of power in the left arm; he can raise it well, but cannot grasp firmly. I have now learned that he has been subject, at long intervals, to epileptic fits, the last occurring some five months ago. The complaint would seem to be an hereditary one, his brother (also in this regiment) being thus affected. The wound retains its ash-coloured surface, and has an offensive but scanty discharge. Repeat the calomel twice a day. The bone is denuded of investment round the orifice in the cranium, and a fungus cerebri is evidently slightly protruding through the aperture. Bowels acted once during the night; no sickness; takes food well.—Evening: Felt well all day, and unaffected by convulsion until this evening, when, about seven o'clock, he experienced slight twitchings of the face, lasting a few minutes. The wound is in the same state; the growth from the brain, sheathed in the dura mater, is evidently increasing in size, though slowly. Bowels have acted thrice; takes broth well; urine rather turbid (from mercury?); pulse tolerably good, 84; no more diminution of power and feeling in the arm than heretofore; continues in full possession of his faculties; gums very sore. Continue treatment.

6th.—Slept well until three o'clock A.M., when the convulsions returned five times in rapid succession, each seizure lasting a few minutes. As heretofore, the attacks presented the characteristics of epileptic fits. He is now in all respects as well as yesterday; takes food well, and speaks in a strong tone of voice; bowels acted once during the night; pupils rather dilated, the right rather more than the left, and they both contract rather slowly when light is applied. Pulse pretty good, 80; tongue rather white from mercury, the action of which is kept up. Continue the powder every night.—Evening: Is now easy and as well as in the morning; but about eleven o'clock A.M., he was suddenly seized with an epileptic fit; the left angle of the mouth worked violently; the pupils were fixed and dilated; jaws set firmly together; face flushed; slight foaming at the mouth; respiration quick and laboured; pulse smooth and very rapid. The limbs at first jerked violently, in a few minutes became relaxed and quiet, but the action of the mouth continued for some ten minutes after. He declares this fit to have differed somewhat from the other two which he has experienced since entering the service.

7th.—Rested well; bowels acted thrice; urine voided freely; no tendency to return of fits; tongue cleaner; pulse very good. Is able to raise himself and to sit up whilst the wound is dressed. Fungoid growth a little larger, the surface presenting an unhealthy appearance, apparently arising from the dura mater investing it being in a sloughing state, and becoming partly detached. Continue powder: lint dipped in nitrate of silver solution applied, and poultice as above.—Evening: Passed a favourable day in all respects.

8th.—Slept well, and there are no unfavourable symptoms present to-day. Edges of the wound granulating. The hernia (about the size of a filbert) presents the same appearance. Slight tenesmus after the powder; gums kept moderately tender. Ordered five grains of mercury with chalk every night; and one ounce of chalk mixture with aromatic confection three times a day.

9th.—Bowels acted thrice, and with less straining; rested well, and is progressing in all respects favourably, except that the hernia is rather larger. Slight numbness of the limbs of left side, and a little want of power. Takes food (broth and a light pudding) very well. Continue the medicine; wound washed with a syringeful of solution of chloride of lime, and a piece of lint dipped in nitrate of silver solution, and compress, applied.

10th.—In all respects as well as reported yesterday.

11.—The hernia seems to be a little larger, and in the centre a small fissure is seen (the original laceration of the dura mater caused by the injury). Voice not so strong. Throughout the night and this morning he has been in a drowsy state, taking no notice of incidents, and only speaking when addressed in a loud voice and touched with the hand. Bowels regular. Continue treatment.

12th.—In the same condition as reported yesterday. The dura mater is sloughing off the surface of the hernia. Takes nourishment well.

13th.—He seems weak from the effects of the copious, thin, and offensive discharge, but otherwise doing well, there being less tendency to doze; takes food well; bowels regular; gums continue tender. The wound presents now a perfectly healthy appearance, except a tumour in the centre. The flaps have coalesced, and the swollen tissue adjacent become sound. Pressure has diminished the protuberance of the hernia in the centre, but it has increased rather at the sides, and overlapped the margins of the aperture in the cranium. Ordered, beef-tea; an ounce of decoction of cinchona to be taken twice a day; omit the powder.

14th.—Strength rather improved; wound filling up at the margins. The dura mater is becoming detached and separated from the surface of the hernia, which latter has become rather smaller since the application of a cork compress, in addition to the other means. Takes food well; bowels confined. To have two drachms of castor oil immediately, and to continue the mixture.

15th.—A portion of bone—an irregular narrowing around the trephined space—is becoming necrosed. The hernia is now reduced almost to a level with the adjacent bone. His general health continues satisfactory in all respects, except that there is some slight want of power and feeling in the left side of the body and extremities. Pupils act well; bowels affected twice after the oil. Continue; an egg for breakfast; two glasses of wine.

16th.—Seems to be more feeble, although he takes food well. Is more listless and indifferent to what is passing around him, although he replies quickly to questions put in a loud tone of voice.

17th.—Not so well. The temperature of the left side of the body is lower than that of the right. He is slower in answering questions, less capable of moving, and is now unable to feed himself. Complains of pain both in the wound and forehead. When the caustic lotion is applied, his face flushes. The hernia has increased considerably—a circumstance owing to its sheath of membrane having sloughed off, except some shreds. The growth is now as large as a walnut. Bowels not acted since yesterday. Takes food well, but appears weaker notwithstanding. Pulse 80, and feeble. To have two drachms of castor oil.—Evening: has passed a restless day, and the bowels have not acted yet. Repeat the castor oil.

18th.—No change in any respect. Bowels acted once freely. Temperature of the left arm now as high as that of the right. Continue mixture; also to take two grains of calomel immediately.

19th.—Worse. Is very feeble, and (except roused by the pain of the wound while being dressed, when he speaks and answers questions readily) is in a state almost of coma. To-day he complains of coldness of the right arm, the fact being that the whole body is diminishing in temperature, owing to vital exhaustion. Takes food still very well. Bowels acted freely yesterday, not since. Pupils are of normal size and act readily. The flaps of the wound are very healthy, and have healed almost completely round the hernia, the latter overlapping the partly-necrosed ring of bone and granulations adjacent. The growth—now an irregular fungoid-looking mass—was, to the extent of nearly one half, removed this morning. Discharge very fetid. Omit mixture; repeat calomel; continue diet, with four glasses of wine.—Evening: Has been very restless, moaning, and complaining much of pain in the back, especially when raised up. He keeps the head bent backwards considerably. Bowels not acted. No paralysis of sphincters. Pulse small and frequent. No inclination for food, and he has vomited it. The hernia has increased considerably since the morning, and now hangs over the wound in a large irregular mass, any attempts to control the growth of which are now evidently useless. Continues quite sensible. Wound dressed with strong solution of chloride of lime. To have an enema of castor oil and spirits of turpentine.

20th.—Rested well during the night, but is in a state of great weakness. Will only take the wine now, unless forced to take beef-tea. Complains greatly of pain in the loins. Bowels have acted well The hernia continues to increase (removed by ligature and incision). Continue treatment.

21st.—The mass removed has not been reproduced, and the wound consequently looks improved. Has had a restless night, but in all respects is no worse than he was yesterday. To have mutton broth instead of beef tea.—Evening: Has taken mutton broth in good quantity, and his strength has improved.

22nd.—Much better. Passed a good night, and his strength continues greater. Pulse 80, and of good volume. The wound continues in a satisfactory state, the hernia being reduced to a level with the bone adjacent. Bowels have not acted. Repeat enema.

23rd.—Not so well. Spent a restless night, and the hernia is somewhat larger to-day. Complains of flatus, and the abdomen is rather tympanitic. Pulse not so strong as yesterday. Has continued to take food well. Complains greatly of the want of sleep, and begs for an opiate. Bowels opened. Ordered hydrochlorate of morphia, one grain, compound rhubarb pill, one scruple; made into four pills. One to be taken every hour.

24th.—Rested well, and expresses himself as being much better for the sleep he enjoyed. Seems more intelligent, and in good spirits today. A slough, almost loose, removed. Discharge from wound offensive and copious. Pulse very feeble. Bowels have not acted. Repeat enema; and to have six glasses of wine, two eggs, two pints of beef tea; continue pill.—Evening: Bowels acted. Has taken food well.

25th.—Passed a restless night, and to-day is in a state of partial coma, but answers questions when roused by the voice and hand. Pulse 100, very weak. Bowels have acted again. He appears to have scarcely any power in his limbs, and seems to loathe all food now. The right eyelid has drooped. Ordered four grains of calomel three times a day; a turpentine enema immediately; omit wine; a beef-tea enema twice a day. —Evening: Is in a state of coma, and has remained insensible since morning. Slight stertor. Pupils fixed and much dilated. Bowels have not acted. Pulse very weak. Hernia not increased. To have ten grains of calomel immediately; repeat the enema every hour.

26th.—Experienced a slight convulsive fit about ten o'clock last night, when the complexion became livid and heavy, and heavy stertorous breathing supervened. He lingered in this state until half-past four o'clock A.M., when he died.

Autopsy, twelve hours after death.—On opening the dura mater, an abscess containing about an ounce and a half of thick healthy pus, was found on the anterior surface of the right hemisphere, corresponding to the frontal bone. The fluid (forming a tumour the size of a small apple) was contained in a sac formed by firm adhesion of the membranes round it. This condition would appear to have prevented the escape of pus through the trephined space, situated parallel, but some four inches posterior, to the collection of matter. The arachnoid on the surface of the brain forming the floor of the pouch was covered with a thick layer of lymph, evidently of recent deposit. The pia mater was throughout congested, as well as all the vessels of the brain, to a slight extent, both external to and within the skull. The fungus, together with the softened and semi-disorganized brain merging into it, extended downwards almost as far as the lateral ventricle. When the diseased portion of brain was removed, a cavity as large as a turkey's egg was left. About a table-spoonful of serum was found in this ventricle. The remainder of the cerebrum healthy. The cerebellum rather softened. The fracture had been confined to the depressed and semi-isolated portion of bone included within the trephined space. The wall of the skull throughout was unusually thin, especially at the parietal protuberances. A very narrow but somewhat irregular ring of bone was in the process of exfoliation, and almost detached from the margin of the trephined aperture. The necrosed bone corresponded with the margin of that cavity, denuded slightly to admit of the application of the instrument. No other abnormal appearances were present.

Remarks.—This case presents several interesting and instructive features.

1st. The circumstance of a man, subsequent to the receipt of such a grave injury, being for a period of four days so little affected by it as to be able to perform his military duty.

To the circumscribed extent of injured bone, the absence of unfavourable symptoms at first may be mainly attributed, yet the depression was considerable enough to warrant an expectation of some signs of compression immediately after the injury. The formation of pus, either simultaneously or otherwise, in the external wound, as well as below the bone, would be an ordinary consequence of neglect and exposure to cold. Illustration is afforded of the unimportant aspect very serious injuries sometimes present at first, and hence explains (though it does not extenuate) the oversight of the surgeon or druggist who dressed the wound after the blow was received. Had a strict regimen and perfect rest been enjoined at first, a fair prospect of recovery would have been afforded. This point leads us to consider—

2ndly. The expediency of the operation.

Experience at the present time appears to prove indisputably the propriety of employing the trephine only in very few and exceptional cases of compound fracture of the skull, even when accompanied by depression. This opinion was strongly entertained by my colleague and self, and were it not for the belief that the tendency to coma, manifestly increasing, was owing to the presence of pus pent up beneath the depressed bone, the operation would not have been performed. The result bore out the diagnosis, and made it apparent that speedy death must have arisen had not the trephine been used. The very firm impaction of bone rendered the employment of an elevator impracticable, whilst the operation was rendered somewhat difficult by the necessity of dispensing almost entirely with the use of the pin in the trephine, and also the unusal thinness of the bone, comparable to that in a young boy's head. The utility of the operation was further evidenced at the post-mortem examination, for the immediate cause of death was a large abscess, the contents of which were afforded a means of escape through the trephined aperture, were it not for adhesions. The thick layer of lymph on the surface of the arachnoid would lead to the impression that subacute inflammation had been present some time, though not evidenced by any symptoms until shortly before death, when pain in the forehead was one day mentioned in reply to questions on the subject. Serous effusion may have changed gradually to pus, notwithstanding the ptyalism, established early and kept up, until the profuse discharge and consequent debility rendered the substitution of bark necessary.

3rdly. Setting aside the abscess—which caused death by a *modus operandi* analogous to apoplexy—would the patient have recovered? I fear not. The only chance of recovery in this case (and I apprehend most others) would be afforded by an extension of the granulating flaps over the hernia, and effectual compression of the latter by this means. But the loss of substance, together with the vital expansion, most probably would have led to a fatal result antecedently. Although a very favourable case for its employment, pressure had only the effect of *retarding* the protrusion of brain.

4thly. Had the complication of the case with epilepsy—apparently a family disease—such an unfavourable influence on the condition of the patient as to accelerate death? I apprehend not. The supervention of the fits was certainly very prejudicial at first, when the patient was in a state of much debility from loss of blood, such hæmorrhage (by depriving the brain of its usual amount of vital stimulus) having probably induced the seizures. When the strength improved, the fits, contrary however to anticipation, never recurred. No abnormal conformation of brain was found, and I would attribute the epilepsy rather to the effects of irregularity of life on an organ protected by an unusually thin cranium, and, possibly, morbidly susceptible of impressions.

As regards treatment, little need be said. I am strongly of opinion that abstraction of blood subsequent to the operation, although recommended by some eminent surgeons, would have induced death speedily by convulsion. Mercury was given largely at the suggestion of my colleague, Mr. Bostock, who was strongly impressed with its efficacy in such cases. The post-mortem examination would certainly indicate the propriety of its exhibition; and although unsuccessful in its more specific action, yet the maintenance of a healthy state of the functions for so long may fairly be attributed in some measure to the effect of the calomel. No want of control over the sphincters occurred at any time. The great loss of substance, together with disorganization of a large portion of the hemisphere, and very slight disturbance of the sensorium throughout, may be viewed as facts corroborative of the theory of duality of the brain.

A SOVEREIGN IMPACTED IN THE LARYNX:

REMOVAL TWO MONTHS AFTERWARDS.

By A. Leith Adams, M.B.,
SURGEON 22ND REGIMENT.

Private B——, 22nd Regt., aged twenty-three, a healthy recruit, during the night of the 24th of May, 1858, was drinking in a tippling-shop, and, anticipating a quarrel, put a sovereign into his mouth. Shortly afterwards he received a blow on the face from the fist of one of his companions, when, immediately afterwards, the coin slipped backwards, and although he made frequent attempts at that time and afterwards to expel it, by irritating the fauces with his finger, no relief could be obtained. He then proceeded to the barracks, a distance of two miles, coughing all the way. He continued employed at his duty for the two following days, although suffering from difficulty of breathing, and occasional fits of coughing. In consequence of the increasing severity of the symptoms, he was obliged to come to the hospital on the morning of the 27th of May, complaining of having "caught a severe cold." The symptoms appearing somewhat obscure, and the man preserving silence regarding the real nature of his illness, my attention was not particularly directed to his state at that time. Accordingly the case was remanded for further observation; when, in the course of the day, he confessed the cause, and gave me the history as above recorded. Having carefully examined the pharynx, an emetic was afterwards given, and the patient was several times placed with his head downwards, and beaten between the shoulders. These measures were followed by no good results. His breathing was loud, and resembled that of a person labouring under an attack of asthma; there was slight difficulty in deglutition, and his voice was hoarse and indistinct. The patient referred the position of the coin to a spot situated over the ventricle and vocal cords, on the right side of the larynx, where loud sonorous râles were distinctly audible, particularly during an expiration; only feebly heard on the opposite side. Examination of the organ externally failed to discover any abnormal symptoms whatever. He complained of occasional short fits of coughing. Apprehensive that the coin was somewhere in the upper part of the larynx (Mr Henry Jackson of Sheffield, Mr. Hooper, 10th Hussars, and my colleague, Mr. Adrien, being of the same opinion), on the following day, May 28th, I placed the patient under the influence of chloroform, and divided the crico-thyroid membrane. Repeated attempts were then made to discover the foreign body by means of probes and curved instruments passed upwards into the larynx, but whenever they came in contact with the mucous membrane, or vocal cords, violent convulsive cough ensued, and rendered almost every attempt abortive. It was, therefore, deemed necessary to desist from further exploration at that time, and wait the result of treatment given with the view of allaying the intense inflammation in the organ. Accordingly, the patient was subjected to a mercurial course; and as a tube could not be induced, the wound was kept as open as possible. This treatment was followed by good results; yet he breathed with difficulty through the wound in the neck.

On the 10th of June, the inflammatory action having greatly subsided, on the appearance of ptyalism, I placed the patient on an inclined plane, with the head depended (somewhat roughly manipulating the larynx all the time.) This measure was followed by no good results, and only increased the dyspnœa.

The day following (June 11th), I enlarged the wound downwards, dividing the cricoid cartilage and three rings of the trachea, and carefully examined the interior of the larynx and trachea by means of probes, which were passed freely upwards, even into the pharynx. I failed, however, in being able to discover the trace of a foreign body. The mucous membrane, although not so highly sensitive as on the previous occasion, was evidently still in a very inflamed state, and prevented the introduction of a tube, so that a piece of cartilage was cut out, in order to render the opening more patent. He passed a very restless night, and the dyspnœa increased.

On the morning of the 12th, an indurated swelling was visible on the left side of the larynx, between the hyoid and thyroid cartilages, and his breathing was much more difficult, so that on the following day (June 13th) the symptoms became alarming, and called for prompt measures to relieve the impending suffocation. I lost no time, therefore, in obtaining the advice of two of the most eminent medical men of Manchester, my excellent friends Mr. Dunville and Dr. Wilkinson, to whom I am so much indebted for their valuable assistance on this occasion. It was agreed that the wound should be enlarged downwards, so as to allow the introduction of a tube into the trachea, hitherto impossible in consequence of the extreme sensibility in and around the larynx. During the operation, repeated attempts were made to discover the foreign body, but without success. The tube was then introduced, and the patient breathed freely. On examining the back part of the pharynx with the finger, attention was directed to the escape of nearly an ounce of pure pus from the upper part of the wound. This occasioned various surmises, and whether the whole symptoms were not referable to the swelling on the left side. However, in the course of a few days the swelling disappeared, but on removing the tube and closing the wound the difficulty of breathing appeared even greater than before, and necessitated its introduction almost immediately after withdrawal. The loud, sonorous râles were still distinctly audible on the right side when the patient breathed through the mouth.

He continued in this state for the following three weeks; his strength, however, improved, and with the exception of the dread and discomfort caused by the tube getting occasionally obstructed, he was free from cough or any urgent symptoms. With the view of allowing air to pass through the larynx, an opening was made in the upper part of the outer canula, which enabled him to breathe partially through the organ; while every opportunity was taken to search the larynx by means of probes and bent sounds.

Having allowed the parts rest for eleven days, on the 22d of July (sixty days after the accident) I removed the tube, and passed a small, bent, silver probe upwards into the larynx, when the rough margin of the sovereign was distinctly felt on the right side of the thyroid cartilage, and in close apposition with the mucous membrane, which seemed to cover its upper half. So firmly was it impacted, that considerable force was required before it could be seized and removed. The coin was not altered in appearance, although sufficient mercury had been taken to produce slight ptyalism. On the day following, the tube was removed, and the edges of the wound brought in close apposition, when the patient's breathing rapidly improved, so that a fortnight afterwards the wound healed up, and with the exception of a little roughness of the voice, and a sense of rawness about the throat, the man is now quite well, and almost fit for duty.

The symptoms during the first few days were by no means so severe as might have been expected from the presence of a foreign body, of the size of a sovereign, in an organ so very highly sensitive as the larynx; and the patient's disposition to conceal the real cause of his illness rendered the diagnosis at first embarrassing. The repeated failures in the attempts to discover the coin were owing in a very great measure to the extremely sensitive condition of the mucous membrane, which chloroform on the first occasion seemed only partially to allay; and in consequence of the dyspnœa increasing during its administration on the 11th of June, it was not given on any subsequent occasion. It must often be a difficult proceeding to discover a foreign body of such a conformation when lying flat on the side of the organ, impacted amongst the vocal ends or pouches, and either partially or wholly covered by the inflamed mucous membrane, as I have every reason to think was the case in the present instance when discovered on the 22nd of July. My own impressions are, that on passing the rima it became entangled about the upper part of the thyroid cartilage on the right side, where the stethoscope all along indicated its presence; and that after a time, as the patient breathed through the tube, and rest was given to the inflamed parts, the coin gravitated a little downwards on the inflammation subsiding. I have no doubt, however, that had he sought relief at once, instead of allowing nearly three days to elapse before any complaint was made, it might have been extracted without much difficulty. The swelling on the left side, which first became apparent on the morning of the 12th of June, was, I believe, caused by injury done to the internal parts during the efforts to introduce instruments on the previous day; and the pus visible on the 13th of June was an accumulation in the deeper-seated parts of the wound resulting from the first operation. I repeatedly attempted to discover a communication between the wound and the supposed abscess, but failed; and the difficulty of breathing continuing, even worse than before, after the swelling had entirely disappeared, seemed almost conclusive evidence that such could not be the case. In this opinion I had the concurrence of my esteemed friends, Mr. Henry Jackson of Sheffield and Staff-Surgeon Moore, to whom I feel very grateful for their unwearied attention and able assistance during the most trying part of this very interesting case.

Manchester, 1858.

ON A CASE OF FOREIGN BODY IN THE BRAIN; ABSENCE OF SYMPTOMS.

By Robert Hughes, Esq., F.R C.S.

SURGEON TO STAFFORD COUNTY GAOL AND GENERAL INFIRMARY, STAFFORD.

In the following case, which came under my notice a short time ago, it is strikingly shown how tolerant the brain may occasionally be, not only of injury, but also of the presence of a large foreign body, and that too for a considerable length of time.

Thomas G—— was committed to the County Gaol to undergo six months' hard labour. I examined him on his admission, and observed that he had a small wound on the forehead, just above the nose; it was covered with a piece of plaster, and did not excite any particular attention. According to his sentence, he was put to hard labour, and continued well for about three weeks. On the 5th of June he complained of headache and general malaise. This, however, was prevalent throughout the gaol, in consequence of the warmth of the weather and some temporary deficiency in the ventilating apparatus. He continued poorly for about a week, and died rather suddenly with symptoms of compression.

Assisted by Mr. S. P. Smith, I made an examination twenty-four hours after death. On opening the head and removing the dura mater, the anterior lobe of the right hemisphere of the brain was found considerably softened, it being impossible to remove it *en masse:* in its anterior was an abscess containing about six drachms of pus. On taking away the softened cerebral matter, a piece of iron was found fixed against the cresta Galli of the ethmoid, occupying a large part of the roof of the right orbit. It weighed an ounce and a half, and was contained in a cyst, which appeared to be formed (at least in part) by the pushing in of the dura mater. The cyst contained also some small pieces of necrosed bone. On the under part of the right hemisphere there could be traced an indentation corresponding with the piece of iron, and in that part of the frontal bone where the wound was situated there was found a perpendicular slit, about an inch long; this was filled up by a membranous septum. The evidence at the inquest showed that fourteen months ago the deceased went out with some companions to try a gun. He several times discharged it, but at last the gun burst, it having been over loaded. The man was wounded in the forehead and hands. He was ill for some weeks, and then recovered, and from the time of his recovery to his admission into the gaol he enjoyed pretty good health, only complaining occasionally of a sensation of weight in the head, especially on stooping. Neither his sight nor smell were interfered with. It appeared that they found all the fragments of the gun excepting portions of the breech and lock. (It was proved to be a piece of the breech that was found in the head.)

The surgeon who attended him, Mr. Fletcher, of Walsall, has very kindly furnished the following additional facts. He states: "I was called to see Thos. C——, I think on Easter Monday last year. I found him suffering from a wound caused by the bursting of a gun, the breech of which had blown out and struck him about the middle of the forehead. The external wound was ragged, much contused, and about an inch in diameter. The frontal bone was fractured, and that part of it immediately behind the external wound was deficient, as if it had been carried away by some solid body which had passed through the bone, and which, in my opinion, was still within the cranium. The man was *perfectly conscious*, and gave a distinct account of the accident, and this consciousness he constantly retained. He suffered no pain, and the only inconvenience of which he complained was a sense of an immense weight in the head; to use his own words, 'his head felt to be a ton weight, and so heavy that he could not raise it from the pillow.' He had not throughout the attendance a bad symptom; he slept well, and took whatever was allowed; it was, in fact, a case requiring no medical or surgical interference. During the attendance several fragments of bone came away from the wound, also a small piece of iron, which I took to be a portion of the gun-lock plate, and a small piece of wood. I continued to attend him about two months, at which time he was able to go about his usual employment. The wound did not perfectly heal, and continued to discharge a little when I last saw him. The only dressing applied to the wound was cold water and lint."

The above case is, I think, particularly interesting, there having been throughout no symptoms which would lead to the supposition that so large a foreign body was within the cranium. The position of the iron was also remarkable. I should rather have expected to find it on the left side, for the gun being applied to the right shoulder, the pieces would fly in a direction from left to right. No doubt the cresta Galli was struck, and this altered the course of the projectile.

EXCISION OF A POLYPOID TUMOUR OF THE UTERUS, WITH THE ATTACHED PORTION OF THE CERVIX UTERI.

By Stephen Nesfield, Esq., M.R.C.S.,
SURGEON TO ST. MARY'S HOSPITAL, MANCHESTER.

Catherine N——, admitted into St. Mary's Hospital on the 5th of July, 1858, aged thirty-nine, married; has had thirteen children and three miscarriages. She enjoyed good health up to her last confinement, three years ago, when she commenced suffering from a profuse leucorrhœal discharge, which was frequently tinged with blood. Twelve months ago she miscarried, and since then she has had repeated attacks of flooding, attended with severe bearing-down pains, and within the last two or three months the floodings have been both more severe and recurred more frequently, so much so as not to leave her more than two or three days free from the discharge. During the last week she has been wholly confined to her bed.

Present state.—Extremely blanched, with a hot, dry skin; pulse 120, very irregular. Examining per vaginam, a tumour, globular-shaped, about the size of an egg, is discovered, growing from the posterior and inner surface of the uterus. Between the tumour and anterior lip the finger can be passed a short distance within the uterus, yet not sufficiently high to reach the upper limits of the tumour. It has no neck, and there is no pain on handling it. Seen through the speculum, the surface is pale, but traversed by bloodvessels. Astringents and plugging were resorted to as temporary expedients; wine, brandy, and good diet ordered.

On the evening of the 8th, in consultation with Dr. Steevens, I scooped away as much of the tumour as possible, with the attached portion of the cervix, by means of a blunt, curved bistoury, having the blade bent, so as to form a second curve. The hæmorrhage attending the operation was only slight. The vagina was plugged, and forty minims of Battley's sedative solution were given, to be repeated as often as requisite.

July 9th.—Passed a good night; no hæmorrhage. To have six ounces of wine and three ounces of brandy daily, with beef-tea, &c.

22nd.—There has been no hæmorrhage, no peritonitis, nor signs of any local inflammation; yet her recovery is very slow, and she faints on being removed. At her own request, she was allowed to be taken home.

30th.—Improved in appearance; feet œdematous. Is taking quinine and iron.

August 12th.—Able to sit up for a few hours each day.

Sept. 16th.—Walked to the hospital, a distance of a mile; feels herself strong; is able to attend to her household duties; has had no return of hæmorrhage. The anterior lip of the uterus is considerably hypertrophied.

In this case there was no other plan of treatment that could be adopted with any hope of success. The ligature was out of the question, as it necessarily must either have included the cervix or removed but a very small portion of the tumour; and excising the tumour, as it could not be removed entire, seemed only of doubtful propriety. The success of the operation must in a great measure be ascribed to the inflammatory changes induced by the operation, and perhaps to the anterior lip of the uterus becoming hypertrophied, which is no doubt due to the effusion of plastic matter.

The tumour was examined under the microscope, and no cancer-cells detected; and, as the history of the disease is not that of a malignant tumour, there seems no reason why the cure should not be permanent. The small amount of hæmorrhage attending the operation tends to show that the risk in excising the cervix uteri is not so formidable as many believe.

September, 1858.

ON A CASE OF HYSTERICALLY-CONTRACTED KNEE-JOINT.

By Paul Henry Stokoe, Esq., M.R.C.S., Maidstone.

Sarah A——, aged twenty-one, a servant, came under my care a month ago, with her right leg flexed upon the thigh at an acute angle, and apparently immovable. In the early part of last January, after prolonged exposure to cold, she was suddenly attacked with swelling in her right knee, accompanied by slight heat and redness, but most severe pain. She was leeched, blistered, and otherwise treated antiphlogistically for three months, with little benefit, the swelling only partially subsiding, and the pain remaining unmitigated. For a time the application of warm poultices, the infriction of oil, and the internal administration of opium severally afforded, or seemed to afford, intervals of relief from the agonizing pain, which had assumed an intermittent character. In the meantime the leg became more and more flexed, until the muscles of the calf were in apposition with those on the back of the thigh. After five months of agony she was permanently and *spontaneously* relieved from her pain, a few days previously to being delivered of a full-grown healthy child, the contracted joint alone memorializing her sufferings.

On presenting herself before me, nearly eight months after the commencement of her illness, I found her to be a ruddy-checked, fair-complexioned, red-haired girl, with a prominent eye, large and dilated iris, long eyelashes, fair and white skin, but coarse at the flexures of the joints, with well-formed head, and very intelligent expression; of a highly nervous and susceptible temperament, and possessing low physical, but high moral courage. Her appetite was good; tongue clean; pulse small and soft; bowels rather costive; urine straw-coloured, normal in quantity, but containing a minimum of salts, &c.; the catamenia had not reappeared since her confinement.

On examining the limb, the acuteness of the angle of flexion was so striking as to suggest the improbability of its resulting from the simple overbalance of the flexor muscles of the leg, as seen in diseased knee-joint. This, combined with the girl's history, led me to conclude, that whatever alteration of structure might then exist, originally the disease was not in the joint, but was, in all probability, hysterical. Hence, I was induced to hope the deformity was remediable.

Finding that even the most gentle attempts to straighten the limb were productive of extreme torture, after attending to her general health for a week or two, I put her under the influence of chloroform, and with very gentle force succeeded in restoring the leg to its natural position. As it became gradually straightened, the yielding of contracted tendons and stiff ligaments was audible, but no actual violence was required to reinstate it. Her manner of receiving the chloroform was highly characteristic of the hysterical temperament. The leg was maintained in position by a light splint, and cold applications applied to the joint for a few days, not to subdue inflammation, for there was none, but rather to assure the patient that she was not neglected. At the same time the pain she complained of was relieved by opiates.

She has not regained the full use of her leg, although possessing considerable power over it at the knee. I have ordered her crutches, so as to enable her to get out into the open air, and to tempt her to resume, gradually, the employment of the long-disused limb. She is also taking ferreous preparations. The entire restoration of my patient I hope to be enabled to communicate at no very distant period.

October, 1858.

COMPLETE EVOLUTION OF A CHILD IN UTERO.

By James Jones, M.D., Lond.

I am desirous of laying before the readers of The Lancet a singular case of spontaneous evolution of a fœtus during labour, which occurred in my practice a few weeks ago. The form of evolution described by Dr. Douglass, of Dublin, in which the feet and breech came down after the arm and shoulder had passed the brim of the pelvis, has many times come under observation, but a complete evolution of the child, such as I am about to describe, I have not before met with, nor have I been able to find any similar case on record.

Mrs. J. B——, a lady from Tasmania, was taken in labour, at the expiration of her third pregnancy, on the 17th of July last. After fifteen hours of pain, she was delivered of a male child, and about ten minutes afterwards the membranes of a second fœtus began to come down. On their being ruptured, both feet descended low in the vagina, when, as is my usual practice, I grasped both legs high above the ankles, and waited the return of an expulsive pain, which soon coming on, I began to make some traction. To my great surprise, I found the legs forcibly drawn from my grasp, until they quite passed above the pelvic brim, and their place then became occupied by the head, which soon descended (face to sacrum), and the labour was rapidly completed. The child appeared still, but artificial respiration being maintained for ten minutes, he cried lustily.

As the shoulders passed the external outlet, I found the right leg forcibly bent on the body, the foot resting on the right shoulder, or rather in the space between the arm and chest. The other leg was born in the natural position.

It appears to me that in this case we have had an instance of an unusual kind of evolution, for, from the position of the feet low down in the vagina, the child's head, and also the breech, must have each glided over a third of the circumference of the uterus, the breech ascending as the head descended. That the head did not lie just above the brim of the pelvis I am quite certain, for the breech was plainly to be felt on passing the fingers along the limbs, occupying the whole pelvic inlet. It would therefore be impossible for the head to have occupied any position other than either erect or bent on the chest. The latter I conceive to have most probably been its position, as it was most favourable to version. The curve formed by the head thus bent, and the spine inclined forward, would make a segment of a circle corresponding to the curve of the uterine cavity. If the uterus then, acting irregularly (a thing not at all improbable in a twin labour), pressed more upon the occiput than any other part of the child, evolution is not by any means an inconceivable process, the more especially when we consider the half empty state of the uterine cavity after the first child has been expelled.

The placenta was expelled soon after the second child. It was of the double bulk usual to twin cases.

The patient made a most excellent recovery, having suffered but little after-pain.

Woburn-place, Russell-square, 1858.

ON TWO CASES OF ULCERATION OF THE STOMACH IN BOYS.

By E. H. Sieveking, M.D.,
PHYSICIAN TO ST. MARY'S HOSPITAL.

The great rarity of ulcers of the stomach in early life appears to justify my putting on record the following two cases, in which, although recovery took place, and therefore the positive confirmation of the diagnosis is wanting, the complex of symptoms scarcely can leave a doubt as to its correctness. The liability to ulcer of the stomach, as Dr. Brinton[*] has well shown, "rises from what is almost a *zero* at the age of ten to a high rate, which it maintains through the period of middle life, at the end of which period it again ascends, to reach its maximum at the extreme age of ninety." The subjects of the two cases I am about to relate were the sons of a man who himself was consumptive, and whose sisters were also phthisical; one of their brothers also laboured under the same disease. They were both well-built, of normal size, but anæmic-looking.

The younger, Charles C—, came under my care on the 15th of January, 1856, when he was eleven years old. He had had rheumatism three months previously, but at the time of consultation complained chiefly of headache, vertigo, and dimness of sight, to which he had been subject for a year. There was a good appetite, and the symptoms were improved by a full meal. He had ascarides, was losing flesh and getting weak. The memory was stated to be less good than formerly, but the expression was not deficient in intelligence; the eyes were clear, and the pupils large. He at times saw his brother distinctly before him, when he knew him to be in another room; he had done so three or four times, the last about a week previously; was much frightened by these visions. During the first visit he had an attack of vertigo and sickness. Ordered, a drachm of iron wine three times a day; turpentine enema.

This treatment was persevered in, and a gradual improvement took place up to March 11th, when the report is—Pain at epigastrium for three or four days, not increased by food, but by taking a deep breath; there is slight tenderness on pressure; the head is nearly well; he only has occasional attacks of the former character, and he looks better. The medicines were ordered to be omitted.

On the 14th of March, the pain at the epigastrium was augmented; the headache had returned; there was tenderness at the epigastrium, but no sickness; tongue clean; bowels open. Apply three leeches to the seat of pain. To take two drachms of almond mixture three times a day; light diet.

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[*] On the Pathology, Symptoms, and Treatment of Ulcer of the Stomach. By William Brinton, M.D. London. 1857. p. 9.

March 18th.—Head and chest still painful; more pain after taking food. Ordered, nitrate of bismuth five grains; almond mixture, four drachms, three times a day.

25th.—Much blood was brought up two days ago, four hours after dinner, after pinching his fingers severely. There is intense flatulency, and severe pain after food at the epigastrium; tongue white; more tympanitic after meals than his brother. Ordered, tannic acid, one drachm; dilute hydrocyanic acid, thirty minims; syrup, one ounce; water, five ounces; one spoonful to be taken three times a day. Apply a large blister to the epigastrium.

28th.—The pain is better; the hæmatemesis has not returned. There was a slight fluctuation in the symptoms, rendering a repetition of the blister necessary; but on the whole a gradual amendment took place, and on May 3rd the boy was well enough to be discharged. When heard of nine months later, he was still well.

His elder brother, who became a patient of mine about the same time, had never had any serious illness previously, with the exception of the measles many years ago; he had, however, often been noticed to fail in strength, and to lose his voice. He was well formed, but looked pale.

Henry C—, aged twelve years and a half, came under my care on the 8th of January, 1856, complaining of pain and oppression at the epigastrium, to which he had been liable for several months at intervals; he had had frequent sickness, followed by a discharge of blood and matter—more of the former. Two days ago (Jan. 6th), after vomiting his dinner, he last brought up blood. The vomiting generally occurred during dinner, about two or three times a week. He perceived no difference in the pain whether hot or cold food was taken; the stomach appeared to be dilated; there was much tenderness at the epigastrium, which was most severe about half way between the sternum and umbilicus. Percussion of thorax good; the vocal resonance has decidedly increased at right apex. The pulse was very small, 112; the tongue almost clean. There was no albumen in the urine. He was limited to farinaceous food and jelly, and the following medicine was ordered:—Tannic acid, one drachm; dilute hydrocyanic acid, thirty minims; syrup, one ounce; water five ounces; mix: one spoonful to be taken three times a day.

Jan. 11th.—He has had repeated sickness, but no more blood has been brought up.

15th.—Still often sick, but no return of hæmatemesis. Appetite improved; is anxious for meat. Repeat medicine and diet as before.

18th.—Slight hæmatemesis a quarter of an hour after each dose of medicine since last visit; otherwise does not appear to have gone back. The sickness preceded by a little cough. Ordered compound kino powder, five grains; cod-liver oil mixture, half an ounce; three times a day.

22nd.—Patient feels better. There is still slight hæmatemesis; the bowels are open; he takes his food better, and is stronger. Continue treatment.

25th.—No hæmatemesis; pulse 96, stronger. Looks better.

28th.—Very little hæmatemesis; he has been sick daily, but did not bring up his meals. Tongue clean; pulse 100.

Feb. 1st.—Bled much at the nose twice during the past week; sick only once, and no blood in the vomit. Still has much oppression at the epigastrium, with occasional pain. Tongue clean; pulse 120. Has taken an egg lately, but no meat. The same treatment continued.

5th.—States himself to be "as nice as possible."

Without giving the individual reports, it may suffice to say that, with slight variations as to symptoms and treatment, he improved gradually, and in the beginning of May considered himself well, and ceased attending as a patient.

He remained well till the following December, when there was a return of sickness, but without hæmatemesis. He again came under my care on January 2nd, 1857, when the report is:—Well till three weeks ago, when the sickness returned; it occurs after all meals, only the food being brought up. The tongue is clean, complexion clear; there is no pain nor tenderness at the epigastrium; bowels regular. To omit meat, and take an ounce of lime-water with three ounces of milk three times a day. Ordered, dilute hydrocyanic acid, thirty minims; almond mixture, eight ounces; two drachms to be taken three times a day.

Jan. 6th.—Has repeatedly vomited his food, but not the lime-water and milk. Has taken no meat. Nothing abnormal discoverable in the stomach or hepatic region. Repeat mixture, and add creosote, thirty minims. Continue lime-water.

9th.—Has not vomited at all since last visit. Continue treatment.

13th—Has vomited once. Has no pain.

16th.—Has no pain or vomiting. To take some fish.

23rd.—No return of pain or vomiting. To take some meat. (N.B. The right pupil is at times larger than the left.)

30th.—Meat gives no pain. Treatment continued.

Feb. 3rd.—Continues well, and is going into the country. Discharged cured.

In these cases we observe the relation so frequently noticed between phthisis and gastric ulcer. There was no positive evidence of either of the boys being tuberculous, though it is probable that in the elder there is a deposit in one lung; and the head symptoms of the younger might find a ready explanation in the presence of encephalic tubercle. The hereditary predisposition, however, was indisputable; and unless the boys enjoy very careful hygienic treatment we can scarcely hope that they will pass through puberty unscathed. The gastric ulceration is however arrested, and one of the elements in the production of pulmonary phthisis—mal-nutrition from incapacity of digesting food—is thus, at least for the time, placed in abeyance. In regard to the treatment, though I believe that the avoidance of all internal irritants in the shape of purgatives, the administration of astringents and sedatives, and the use of external counter-irritation, were important and necessary, I conceive that the most essential feature was the use of perfectly unirritating but nutritious and easily-digestible food; milk, isinglass, and light farinaceous puddings, being the articles to which, as in similar cases generally, I limited these two patients.

Manchester-square, October, 1858.

ON A CASE OF DISLOCATION OF THE ULNA AND RADIUS BACKWARDS.

REDUCTION AFTER FIFTY-TWO DAYS.

By W. Philpot Brookes, M.D., F.R.C.S.

Sarah G——, aged seven years, fell down while at play in the yard of the workhouse, on the 15th of August, 1858, and met with what at that time was deemed an injury of the elbow-joint. On the 2nd of October, the surgeon of the house (who had been elected some days after the occurrence of the accident) called on me to examine the case. I immediately discovered the nature of the injury, and endeavoured by gentle manipulation to break down the adhesions, finding it useless at that time to endeavour to reduce the dislocation. We allowed the case to remain until Monday, Oct. 4th, intending on that day to give the child chloroform.

Oct. 4th.—I did not administer chloroform. I made extension with my thumb in the axilla, grasping with my hand the humerus. With the other hand I made counter-extension from the wrist, and bending the elbow-joint round my knee. This was kept up some five minutes or more. Once or twice during the time I found the adhesions give way, and shortly afterwards I felt the sudden jerk of reduction. She could now perform flexion, extension, pronation, and supination, perfectly. The olecranon had returned to its natural situation. The condyles of the humerus were also now in their true position.

The length of time—*fifty-two days*—since the occurrence of the dislocation, gives this case, in a practical point, some interest, Boyer having laid it down that such a dislocation is rarely, if ever, reduced after the fifteenth day. I believe Sir Astley Cooper succeeded, in a like injury, after a longer time had elapsed than *fifty-one days*.

Cheltenham, Oct. 1858.

ON THE USE OF HYDROCHLORATE OF AMMONIA IN NEURALGIA.

By Horatio C. Brenchley, Esq., M.R.C.S.,

SURGEON TO THE BRIGHTON DISPENSARY.

The hydrochlorate of ammonia, although a very old medicine, has been very rarely employed internally. I cannot call to mind having once seen it so used during the whole time I have been in the profession. It has, however, as you observe, been long in use in Germany, though chiefly as an alterative and resolvent; but, recently, it has been much in repute in India for the cure of neuralgia. I can bear testimony myself to its great value in this painful affection.

The method of exhibiting it is in doses of half a drachm, in camphor-mixture or spearmint-water, every hour during the paroxysm, until the pain is relieved; and it is affirmed, that the prolonged use of it, in smaller doses, for a few days, produces immunity from future attacks.

In order that I may not occupy too much of your time and space, I will relate but one case:—A young man, aged twenty-three, unmarried, healthy, and without any other apparent complaint, had long suffered from very severe attacks of neuralgia of the face, coming on at intervals of about one month, and lasting from two or three days to a week. It sometimes came on on one side of the face, and at other times on the other side. During one of these attacks I saw him, and ordered him quinine and arsenic, which put an end to the attack for the time. After the lapse of a month or six weeks, he had a second attack, which was cured in the same way. A third attack, however, came on after a shorter interval. This time the quinine and arsenic failed to relieve him. On the third day, when I saw him, he was in great agony, propped up in bed, and unable to do anything from the severity of the pain. The left side of his face was swollen, flushed, and hot—the temperature considerably higher than on the right side; the heat also of the inside of the mouth was so great, that I expected I should find matter forming from decayed teeth; but, on examination, I failed to do so.

I now tried the much-vaunted remedy—the valerianate of ammonia, but without any effect. The usual remedies having failed, I gave him the hydrochlorate of ammonia, in doses of half a drachm, every hour, in camphor-mixture. I saw him three hours after he had commenced this treatment, and found he had been much relieved after taking the second dose; and, having taken the third dose, he was almost free from pain, and begged to be allowed to continue the remedy. The heat and flushing of the face had subsided, and the temperature of the mouth considerably reduced, feeling quite cool after the burning heat of its former state. He went on for three or four days with the remedy, in doses of fifteen grains, three times a day, although there was no return of pain. Three months have now elapsed, and he has had no relapse.

The *modus operandi* of this medicine is not very clear; but whatever other specific virtues it possesses for the cure of neuralgia, in this particular case it evidently acted as an indirect sedative, by lessening the arterial action; for the first and most striking effect of the medicine was the rapid lowering of the temperature of the mouth and face. From further observation, I have found that this remedy is most useful in those cases of neuralgia which are attended with heat and swelling.

From what I have seen of its action, I shall, for the future, always feel that we have, in the hydrochlorate of ammonia, an addition to our list of remedies for neuralgia which is most useful, safe, and efficient.

Lansdowne-place, Brighton, October, 1858.

FATAL CASE OF GOITRE.

By A. F. Edwards, M.D., Wiveliscombe.

Goitre is, in this country, so rarely the cause of death, that I beg to forward the following case for insertion in The Lancet:

On the 13th of September, 1858, Rhoda H——, aged thirteen,—general appearance healthy; complexion florid; blue eyes; had not menstruated,—complained of dyspnœa, which I found arose from bronchocele of the whole gland. Prescribed iodide of potassium, internally and externally.

Sept. 24th.—Dyspnœa continued. Ordered leeches to the neck.

28th.—Inability to sleep at night, being roused by a sense of "suffocation," forcing her to "jump up on her hands and knees." Cupping scarificator to both sides of the neck, which was tense and hard, in order to relieve the pressure exercised by the gland, and a small quantity of blood taken.

29th.—Walked about as usual, without much inconvenience. Laying her head on a table, and falling asleep, she suddenly awoke, gasped for breath, and became quite insensible; her countenance livid, and the pulse scarcely perceptible at the wrist. She died, apoplectic, in half an hour.

At the inquest held by Mr. Monckton, on the 2d October, I stated—"I am of opinion that she died of apoplexy from the pressure of the goître on the internal jugular veins. Sleeping in the recumbent position would tend to accelerate the cause of death in such a case. It is very rare for goître to cause death; but it does so either where the tumour produces pressure by being very large, or of such rapid growth that the surrounding parts have not time to accommodate themselves to the pressure; which latter was the cause of death in this case." In support of my opinion, I cited the following passages from Boyer's "Traité des Maladies Chirurgicales," vol. vii., p. 68: he says, "Mais quand la tumeur est très grosse, et surtout lorsqu'elle est dure et en quelque sorte squirrheuse, la compression qu'elle exerce sur le larynx, la partie supérieure de la trachée-artère, les artères carotides, et les veines jugulaires internes, rend la voix faible et rauque, gêne la déglutition, la respiration, produit une apoplexie mortelle, ou fait périr par une suffocation lente à laquelle il est impossible de remédier." Page 70: "Lorsque l'inflammation occupe la totalité de la tumeur, qu'elle est très intense, et qu'elle présente tous les caractères du phlegmon, la compression que la goître exerce sur le larynx et la trachée-artère, peut être assez grande pour intercepter la respiration, et faire périr la malade de suffocation." Page 82: "Ainsi l'extirpation de la thyroïdé est au nombre des opérations que la prudence, la raison, et l'expérience désavouent."

Wiveliscombe, Somerset, October, 1858.

ANNUAL REPORT OF CASES ADMITTED INTO THE MEDICAL WARDS OF ST. GEORGE'S HOSPITAL DURING THE YEAR ENDING DEC. 31st, 1857.

By G. Goddard Rogers, M.D.,

MEDICAL REGISTRAR.

This annual report is the fifth which has been published. It differs in no important respect from those which have hitherto appeared, either as separate pamphlets, or amongst the "Original Communications," in the *British and Foreign Medico-Chirurgical Review*. Brevity has been studied to fit it for the pages of a weekly journal; but the few facts brought forward in the explanatory remarks, will convince any one that the materials exist for rendering it a far more useful and instructive contribution to our hospital statistics. In a former report I expressed a hope that all of the metropolitan schools would co-operate with St. George's and the other institutions which adopt a system of registration. It is impossible to over-estimate the importance of the facts which would thus be elucidated; whilst it would be a step in the right direction towards obtaining a satisfactory uniform nomenclature of disease.

NATURE OF DISEASE.	CASES ADMITTED DURING THE YEAR 1857.					ADMITTED DURING 7 YEARS.	
	Admitted.	Died.	Per centage of mortality.	Complicated with other diseases.	Deaths amongst complicated cases.	Admitted.	Per centage of mortality.
1. *Fevers:*							
Continued fever	117	17	14·53	40	12	1028	11·5
English cholera	1	. .	. . .	. . .	. . .	. .	. . .
Remittent fever	. .	. .	. . .	. . .	. . .	2	. . .
Influenza	11	. .	. . .	. . .	. . .	87	. . .
2. *Eruptive fevers:*							
Measles,	1	. .	. . .	. . .	. . .	98	. . .
Scarlatina,	13	3	23·07	3	2	92	13.04
Variola,	. .	. .	. . .	. . .	. . .	18	. . .
Varicella,	1	. .	. . .	. . .	. . .	1	. . .
Erysipelas,	15	3	20·0	5	3	163	14·7
3. *Intermittent fevers:*							
Quotidian	7	. .	. . .	. . .	. . .	35	. . .
Tertian	14	. .	. . .	2	. . .	63	. . .
Quartan	1	. .	. . .	. . .	. . .	7	. . .
Irregular	6	. .	. . .	1	. . .	21	4·76
4. *Rheumatism:*							
Acute	90	5	5·55	33	5	533	4·30
Subacute and slight	165	. .	. . .	15	. . .	713	?
Chronic	109	1	. . .	27	1	324	
5. *Gout:*							
Gout	9	1	11·0	3	1	237	
Rheumatic gout	39	. .	. . .	10	. .		
6. *Poisoning:*							
Irritant	2	. .	. . .	. . .	. . .	13	15·3
Narcotic	2	. .	. . .	. . .	. . .	17	5·88
Gaseous	. .	. .	. . .	. . .	. . .	2	. . .
Syphilitic	9	. .	. . .	2	. . .	74	. . .
Gonorrhœal	9	. .	. . .	3	. . .		. . .
Hydrophobia	. .	. .	. . .	. . .	. . .	. .	. . .
7. *Colica pictonum*	7	. .	. . .	3	. . .	47	. . .
8. *Entozoa:*							
Intestinal worms	6	. .	. . .	1	. . .	35	. . .
Echinococcus hominis	. .	. .	. . .	. . .	. . .	2	100·0
9. *Dropsy:*							
Anasarca	117	33	28·2	105	33	785	35·2
Ascites	14	2	14·3	7	2	118	46·6

NATURE OF DISEASE.	CASES ADMITTED DURING THE YEAR 1857.					ADMITTED DURING 7 YEARS.	
	Admitted.	Died.	Per centage of mortality.	Complicated with other diseases.	Deaths amongst complicated cases.	Admitted.	Per centage of mortality.
10. *Hæmorrhages:*							
Epistaxis	4	1	...	4	1	29	18·7
Hæmoptysis	27	8	14·8	19	4	187	21·1
Hæmatemesis	7	..	...	2	...	50	8·00
Hæmaturia	8	..	...	1	...	44	9·09
Intestinal	8	..	...	8	...	47	19·1
Uterine	7	..	...	1	...	56	5·35
11. *Purpura and scurvy:*							
Purpura	6	1	16·4	4	1	38	23·6
Scurvy	2	..	...	1	...	9	...
12. *Anæmia*	58	2	...	24	2	488	2·47
13. *Chlorosis*	10	..	...	1	...	122	...
14. *Cachæmia*	6	2	33·3	4	2	51	43·1
15. *Scrofula*	9	4	44·4	6	4	77	20·7
16. *Tubercular Diseases:*							
Phthisis	126	50	39·6	65	34	920	34·8
Tabes mesenterica	2	1	50·0	1	1	2	50·0
Tubercles in brain	5	5	100·0	4	4	20	95·0
Accretions in peritoneum	5	5	100·0	5	5	29	89·6
17. *Morbid growths:*							
Hydatids	2	..	...	...	...	13	53·8
Encephaloid	19	13	68·4	10	8	79	73·8
Scirrhus	21	6	28·5	4	3	189	19·4
Colloid	...	..	...	...	...	2	50·0
Epithelial	1	.	...	...	...	3	66·6
Tumours of bone	...	..	...	...	...	2	100·0
18. *Hysteria*	60	..	...	14	...	878	...
19. *Chorea*	17	..	...	1	...	181	...
20. *Delirium tremens*	20	8	40·0	8	6	118	22·1
21. *Tetanus*	...	..	...	...	...	6	16·6
22. *Diseases of the brain and spinal cord:*							
Cephalitis	11	11	100·0	9	9	68	89·7
Chronic disease	6	4	66.6	5	4	58	29·3
Epilepsy	22	6	27·2	13	6	178	16·2
Apoplexy	14	9	64·2	10	6	54	61·1
Functional disturbance	21	..	...	2	...	251	2·39
Coma and convulsions	7	4	57·1	7	4	15	53·3
Insanity	4	..	...	3	...	14	...
Inflammation of cord	2	2	100·0	2	2	17	70·5
23. *Paralysis:*							
Hemiplegia	32	6	18.7	12	6	202	9·40
Paraplegia	7	1	14.2	1	1	116	13·7
Local paralysis	17	4	23·5	7	4	82	6·09
General paralysis	3	..	...	1	...	7	14·2
24. *Neuralgia:*							
Tic douloureux	3	..	...	...	...	22	...
Sciatica	15	..	...	2	...	93	...
Hemicrania	4	..	...	1	...	14	...
Angina	1	..	...	...	...	3	...
25. *Diseases of the heart:*							
Pericarditis	22	7	31·8	21	7	114	34·2
Endocarditis	16	2	12·5	16	5	103	9·70
Hypertrophy	22	16	72·7	20	16	169	62·1
Dilatation	14	8	57·1	14	8	108	52·7
Valvular disease	64	17	26·5	52	15	406	25·8
26. *Diseases of the arteries and veins:*							
Aneurism	6	3	50·0	3	3	36	50·0
Phlebitis	4	2	50·0	2	2	41	31·7
27. *Diseases of the respiratory organs:*							
Laryngitis	4	1	25·0	2	1	56	42·8
Tracheitis	4	3	75·0	1	1	11	45·4
Bronchitis	137	24	17·5	91	24	917	13·08
Emphysema	20	6	30·0	20	6	109	34·8
Asthma	10	..	...	3	...	21	...
Pneumonia	72	28	38·8	48	24	359	31·4
Pleurisy	69	23	33·3	45	20	333	32·8
Pertussis	2	1	...	2	1	10	8·00
Pneumothorax	1	1	100·0	1	1	8	75·0
28. *Diseases of the mouth and pharynx:*							
Glossitis	1	..	...	...	...	3	...
Quinsy	10	..	...	3	...	65	...
Enlarged tonsils	5	1	...	4	1	35	...
Ulceration	11	2	18·1	5	2	48	11·4
Mumps	3	..	...	..	...	17	...
29. *Diseases of the stomach and œsophagus:*							
Stricture of œsophagus	...	..	...	...	...	11	18·1
Dyspepsia	63	2	...	22	2	434	...
Ulceration	7	3	42·85	4	2	20	75·0
30. *Diseases of the intestinal canal:*							
Obstruction	1	1	100·0	...	...	9	55·5
Constipation	36	..	...	15	...	290	...
Enteritis	2	..	...	1	...	3	...
Diarrhœa	34	3	8·82	17	3	258	8·29
Dysentery	9	3	33·3	4	3	36	36·1
Tympanitis	5	..	...	1	...	19	...
Ulceration	6	6	100·0	6	6	25	100·0
31. *Diseases of the peritoneum:*							
Acute peritonitis	23	8	34·7	11	8	155	40·0
Chronic peritonitis	14	5	35·7	8	5	69	41·5
32. *Diseases of the liver and gall-bladder:*							
Inflammation and congestion	11	..	...	3	...	62	17·7
Cirrhosis	2	2	100·0	2	2	70	77·1
Enlargement	11	2	18·1	7	2	76	19·7
Jaundice	25	2	8·00	10	2	121	21·4
Abscess	1	..	...	...	...	5	...
Gall-stones	2	1	...	2	1	8	...
33. *Diseases of the pancreas*	..	..	...	...	...	..	...
34. *Diseases of the spleen:*							
Enlargement	8	..	...	8	...	31	41·9
35. *Diseases of the urinary organs:*							
Nephritis	13	3	23·07	...	...	51	21·5
Abscess	2	1	50·0	1	1	12	33·3
Albuminuria	96	40	41·6	94	40	635	44·9
Cystitis	1	..	...	...	...	42	...
Diuresis	1	..	...	...	...	6	...
Ischuria	1	..	...	1	...	5	75·0
36. *Diabetes*	7	1	14·2	1	...	39	12·8
37. *Diseases of the ovaries:*							
Dropsy	11	3	27·2	2	2	45	24·4
Tumours	9	1	11·1	2	1	59	5·08
38. *Diseases of the uterus:*							
Amenorrhœa	31	2	...	20	2	129	...
Menorrhagia	11	..	...	6	...	86	...
Leucorrhœa	12	..	...	3	...	79	...
Tumours	9	..	...	1	...	48	10·4
Prolapsus	9	..	...	3	...	42	...
Congestion	6	..	...	1	...	24	...
Ulceration	1	..	...	...	...	4	...
Doubtful pelvic tumours	8	..	...	...	...	14	...
External organs	8	..	...	...	...	20	...
39. *Diseases of the bones and joints*	20	6	...	14	6	74	24·3
40. *Diseases of the skin and cellular tissue:*							
Erythema	11	..	...	5	...	80	...
Urticaria and roseola	4	..	...	3	...	22	...
Lichen and prurigo	7	..	...	7	...	22	...
Squamous eruptions	15	..	...	1	...	70	...
Vesicular eruptions	12	..	...	6	...	35	...
Pustular eruptions	4	..	...	3	...	36	...
Pompholix and rupia	1	..	...	...	...	12	...
Cellular inflammation and abscess	21	2	9·52	12	2	80	26·09
41. *Diseases of the muscles*	1	..	...	1	...	3	?
42. *Anomalous and accidental cases*	9	..	...	...	...	43	18·6

The following brief analysis is added as explanatory of the second and fourth columns of the accompanying table.

DIVISION 1.—*Fevers.*—Twelve fatal complicated cases occurred, which are thus distributed:

3	patients had	phthisis.
2	"	pneumonia.
1	"	diffuse cellular inflammation.
1	"	delirium tremens.
1	"	arachnitis, and very extensive intestinal ulceration.
1	"	strumous disease of the cerebellum and medulla oblongata.

1 patient had arachnitis, caries of the temporal bone, and albuminuria.
1 " valvular disease of the heart, and diarrhœa.
1 " profuse intestinal hæmorrhage.

A lad was admitted with cholera in the autumn; it was of a mild character, cramps being absent, although the vomiting, rice-water evacuations, and collapsed state, were well-marked. He was under treatment for a week.

Division 2.—*Eruptive Fevers.*—1 patient died from sloughing sore-throat, with scarlatina; another from subsequent pneumonia and abscess of the kidney. 3 deaths occurred amongst the cases of erysipelas, one being a phthisical patient, who sank from acute peritonitis, and ulceration of the bowels; another died from tubercular peritonitis; another from dropsy and jaundice. A patient with erysipelas had desquamative nephritis; another a long attack of gout: both recovered.

Division 3.—*Intermittent Fevers.*—Great enlargement of the spleen was noticed in one case of Tertian ague.

Division 4.—*Rheumatism.*—26 cases of acute rheumatism were complicated with some cardiac affection.

13 had pericarditis.
15 " endocarditis.

Whilst pericarditis and endocarditis co-existed in eight of these.

2 had chronic valvular disease.
1 " hypertrophy and pericarditis.
1 " dilatation and endocarditis.

Division 5.—*Gout.*—In the sixth column the totals of gout and rheumatic gout are added together. Until 1855 the two diseases were not entered under separate headings in the annual report.

1 gouty patient died from Bright's disease.

Division 6.—*Poisoning.*

1 was a case of poisoning by copperas.
1 " " oxalic acid.
2 " " laudanum.

Gonorrhœa and syphilis occur only accidentally in the physicians' wards. 8 cases of gonorrhœa were accompanied by rheumatism of a subacute form.

Division 9.—*Dropsy.*

In 65 of these patients disease of the kidneys existed.
" 27 " " disease of the heart.
" 34 " " disease of the lungs.

2 fatal cases of ascites are recorded—
1 from cirrhosis and albuminuria.
1 " jaundice and encephaloid disease of the liver.

Division 10.—*Hæmorrhages.*

Out of 19 cases of hæmoptysis 12 had tubercles.

1 case of hæmatemesis was connected with ulceration of the stomach.

Intestinal hæmorrhage proved fatal in a case of fever. (See Div. 1.)

Uterine hæmorrhage was complicated in 1 patient with great prolapsus.

Division 11.—*Purpura and Scurvy.*

1 death occurred in a patient with pleura-pneumonia and renal dropsy.

3 other cases of purpura were complicated—
1 with hæmoptysis and pneumonia.
1 " urticaria.
1 " bronchitis.

1 case of scurvy was complicated with dropsy and bronchitis.

Division 14.—*Cachemia.*

1 death from abscess of the brain and diseased bones of the ear, with pyæmia.
1 from necrosis of the lower jaw with gangrene.

Division 16.—*Tubercular Diseases.*

All the cases of tubercle in the brain and peritoneum were verified by post-mortem examination.

In a case of phthisis, tubercles were found in the supra-renal bodies. No bronzing of the skin was observed during life.

Division 17.—*Morbid Growths.*

Encephaloid disease had its seat in the following viscera:

In 5 cases in the liver.
" 1 " all the pelvic organs.
" 5 " the uterus and ovaries.
" 1 " the spinal cord.
" 1 " the kidneys.
" 2 " the lungs.

In another case nearly every organ in the body was infiltrated with cancerous matter.

A woman, with chronic peritonitis and presumed cancer of the liver, went, after leaving St. George's, to King's College Hospital, where she died. At the autopsy, extensive encephaloid disease of the liver was discovered.

Scirrhus was situated
In 15 cases in the uterus. (In 1 of these, ulceration of the stomach was also found.)
In 2 cases in the stomach.
" 1 " lip.
" 1 " intestines.
" 1 " thyroid body.

Epithelial cancer occurred in 1 case on the labia pudendi.

Division 20.—*Delirium Tremens.*

1 fatal case complicated with continued fever. (See Div. 1.)

1 fatal case complicated with albuminuria and epilepsy.

2 fatal cases complicated with pleuro-pneumonia.

1 fatal case complicated with subacute rheumatism.

1 fatal case complicated with Bright's disease.

Division 22.—*Diseases of the Brain, &c.*

Chronic disease of the brain was associated in
1 with epilepsy and hemiplegia.
1 " bronchitis and valvular disease.
1 " phthisis and arachnitis.

1 with softening of the cord, paralysis, and albuminuria.
1 " hemiplegia.

6 cases of coma and convulsions were dependent on renal disease; one was a case of epilepsy and convulsions without any kidney affection.

1 case of insanity was accompanied by general paralysis.

Inflammation of the cord was mentioned above in connexion with a case of chronic disease of the brain. Another case occurred in a patient with cephalitis. Both proved fatal.

Division 23.—*Paralysis.*

Out of 32 admitted with hemiplegia, 6 died of appoplexy.

Division 25.—*Diseases of the Heart.*

Hypertrophy was accompanied in
9 cases by dropsy.
5 " disease of the lungs.
6 " " kidneys.

All the cases of dilatation, except 3, were accompanied by disease of the lungs.

Valvular disease was associated in 9 with albuminuria.

(For pericarditis and endocarditis see Div. 4, Rheumatism.)

Division 26.—*Diseases of Bloodvessels.*

There is an increase in the per centage of deaths from aneurism as compared with previous years. The 6 cases admitted were all connected with the arch of the aorta.

2 cases of phlebitis were fatal: 1 was complicated with pericarditis, pneumonia, and albuminuria; the other, with acute peritonitis and tubercular accretions, and a large abscess of one ovary.

Division 27.—*Diseases of Respiratory Organs.*

14 cases of pleurisy were complicated with pneumonia.

1 case of laryngitis (following continued fever) recovered.

2 of idiopathic laryngitis recovered; 1 proved fatal, and was complicated with phthisis, valvular lesion, and Bright's disease.

2 patients, on whom tracheotomy was performed for croup, died. Another death occurred where no operation was resorted to. In a boy, six years old, who had been ill a week, the trachea was opened on his admission, and he made a good recovery.

In an exceedingly well-marked case of pneumothorax, phthisis and hydro-thorax were also present. Life was prolonged three days by paracentesis.

Division 28.—*Diseases of Mouth and Pharynx.*

There was 1 fatal case of ulcerated throat, with abscesses about the tonsils; the patient also suffered from ulcerated intestines and Bright's disease.

A severe case of glossitis yielded to free scarification.

Division 29.—*Diseases of Stomach, &c.*

There were 3 fatal cases of ulceration of the stomach; in one, renal dropsy and bronchitis were present; another occurred in a woman with malignant disease of the uterus. (See Div. 17.)

Division 30.—*Diseases of Intestinal Canal.*

Dysentery was fatal in
2 cases of phthisis.
1 case of acute peritonitis.

Division 31.—*Diseases of Peritoneum.*

Chronic peritonitis was associated, in 3 cases, with tubercular accretions, and in 3 with malignant disease of the liver, ovary, and intestines respectively.

Division 32.—*Diseases of Liver.*

This organ was found greatly enlarged in a fatal case of phlegmonous erysipelas with phthisis and acute peritonitis, and in one of cardiac dropsy with pneumonia.

In 9 other cases it encroached more or less beyond its ordinary limits.

An abscess of the liver broke externally: the patient, a man, twenty-seven years old, did well.

Division 34.—*Diseases of the Spleen.*

Great enlargement was noticed in a case of intermittent fever, (see Div. 3;) in a case of epistaxis and valvular lesion, and in 1 of constipation.

Division 35.—*Diseases of Urinary Organs.*

Of 14 cases of nephritis, 10 occurred after scarlatina.

Abscess of the kidney was associated with scarlatina and pneumonia in a scrofulous child, three years old.

Out of 96 cases of albuminuria, 57 were accompanied by dropsy. In 28, organic disease of the heart or lungs was present.

Division 36.—*Diabetes.*

The same number of patients and the same proportion of deaths are recorded as during the year 1856. 1 patient was affected with secondary syphilis.

Division 37.—*Diseases of Ovaries.*

A fatal case of abscess, which tubercular peritonitis and phlebitis, is mentioned in Div. 26.

Division 38.—*Diseases of Uterus.*

There was 1 case of retroversion. Under the subdivision, "Tumours," those of a non-malignant kind only are included.

Division 39.—*Diseases of Bones and Joints.*

2 deaths occurred in patients with disease of the temporal bone, and 1 in a patient with morbus coxarius. The other deaths under this heading arose from phthisis or renal disease.

Division 41.—*Diseases of Muscles.*

In a case of gout and erysipelas there was remarkable relaxation of the extensor tendons of the left arm.

Division 42.—*Anomalous Cases.*

These comprehend attempts at drowning, intoxication, and a case of profuse salivation.

A Mirror
OF
THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Prooemium.

KING'S COLLEGE HOSPITAL.

Three Cases of Disease of the Tarsus: Pirogoff's Amputation at the Knee-Joint; Recovery with a good Stump.

(Under the care of Mr. FERGUSSON.)

THE profession are familiar with Syme's amputation at the ankle-joint, an operation which has been frequently illustrated in our "Mirror," and some examples of which we will again place upon record at an early opportunity. In this amputation the whole of the calcaneum is removed; but in a modification of it by M. Pirogoff, of St. Petersburgh, that portion of this bone to which the tendo-Achillis is attached, is allowed to remain by sawing it across in an oblique direction. Pirogoff's operation has not as yet come into general use amongst English surgeons; it has been performed by Mr. Ure at St. Mary's, Mr. Simon at St. Thomas's, Mr. Partridge at King's College, by Mr. Busk three times, Mr. Tudor twice, and Mr. Croft once at the *Dreadnought* Hospital. Success has attended all of these, except in two instances at the *Dreadnought*, but in which Mr. Busk has stated elsewhere the operation had nothing to do with the death of the patients. During the past summer we had the opportunity of witnessing it in three different cases in King's College Hospital, the notes of which we briefly place upon record to-day through the kindness of Mr. Liddon, the house-surgeon. In the first of these the os calcis contained an oval sequestrum, but the bone was healthy all round; in each the tarsus was more or less in a diseased condition.

The advantages of leaving a portion of the calcaneum seem to be, that not only is the operation very neatly and expeditiously performed, but a larger and better stump is obtained, with, it is said, a less amount of suppuration than in Mr. Syme's operation; at the same time the stump is also not only larger, but is considered better for pressure, and a ready union ensues between the osseous surfaces. The formation of a solid over a hollow flap does seem an improvement in the operation; but time and experience have yet to test its real merits, especially whether the portion of the calcaneum left behind will remain healthy. Mr. Fergusson stated, when we saw him perform the operation on March 6th, that it was officially reported to Sir James Hall that this operation had been abandoned by Pirogoff himself, who had modified his operation to that of Mr. Syme. That may be very possible; but we were assured recently by Professor von Becker, surgeon in-chief at the University of Helsingfors, that it is still much practised by Russian surgeons.

CASE 1.—W. H——, aged nineteen, a pallid lad, of decidedly strumous habit, was admitted on the 21st of January last, under the care of Mr. Fergusson, with disease of the right ankle, and abscesses in the thigh and arm of the same side of the body. During his boyhood he was always strong and had a florid complexion; but during the year preceding the first appearance of his illness he had grown very fast, and had followed an in-door occupation. In March, 1857, an abscess formed above and on the inner side of the right knee; this could not be attributed to any injury. In July, an abscess appeared on each side of the right ankle; and in October, another abscess developed itself on the outer side of the right arm. None of the above have ever healed up. On admission, the ankle-joint was considerably swollen; there was an opening in front and to the inner side of the ankle, and another behind and to the outer side: the bones were found to be extensively diseased, and a probe could be passed from one opening to the other. Three sinuses discharged very freely.

Feb. 27th.—The patient, having somewhat improved in health, was placed under the influence of chloroform, and Mr. Fergusson performed Pirogoff's operation. After the foot had been separated from the anterior portion of the os calcis, the posterior was found to be in a very suspicious condition, so that Mr. Fergusson with a knife shaved a further portion of it away, and then used the gouge. No vessel required ligatures. The flap was easily brought into apposition, and retained there by sutures.

March 1st.—The dressings were removed; the wound discharged freely; water-dressing was applied.

2nd.—Several of the sutures had given way, and the wound began to gape; its edges were brought together by adhesive plaster. A small slough passed over the inner malleolus, corresponding with one of the original sores.

6th.—Slough separated; a copious but healthy discharge.

After the above date, the wound gradually united in front, the angles remaining open. In a few weeks the inner angle closed, but the outer continued to discharge.

On the 19th of May it was reported: "The patient can bear considerable pressure upon the stump; a probe passes down to bare bone on the inner side and also on the outer side of the stump."

The bone not finding its way out, on the 12th of June Mr. Fergusson removed it with the gouge and forceps. After this proceeding the stump greatly improved, and a few small pieces of bone worked out. At present the patient's health is greatly improved; there is still, however, a small portion of bone to come away from the outer side of the tibia.

CASE 2.—F. B——, aged seventeen, admitted under the care of Mr. Fergusson on Feb. 20th, 1858, with disease of the ankle-joint.

On Nov. 5th, 1857, he slipped off the kerb, and sprained his left ankle. This did not trouble him much. About a month afterwards he met with a similar accident, and the ankle became very much swollen and excessively painful.

On admission, the ankle was very much swollen and inflamed; there was no external opening leading to the joint. The tissues around the joint gave an elastic feel on being touched, and their elasticity was well seen on pressure being applied to the sole of the foot. The joint also allowed of unusually free lateral motion.

On the 6th of March, Mr. Fergusson performed Pirogoff's operation. Two ligatures were required; the flaps were brought together, and an excellent stump formed.

On examining the foot, the ankle-joint was found to be healthy; the synovial membrane between the tarsal bones, especially between the astragalus and scaphoid, had undergone gelatiniform degeneration.

After the operation the patient went on well in every respect. Two or three abscesses formed on the outer side of the ankle, and were opened.

On June 1st, considerable pressure could be made on the stump without causing pain; had not as yet put his leg to the ground.

On the 19th of June, the stump had healed, excepting at one or two spots. The boy still very pallid in face, though much stronger altogether, and left the hospital for the country.

(Under the care of Mr. Partridge.)

Case 3.—W. G——, a pale child, five years old, was admitted on Nov. 19th, 1857, with abscesses in the vicinity of the ankle joint. There was an opening (a small sinus) on the outer and on the inner side of the left ankle-joint; also some swelling on both sides of the joint, which gave a sense of fluctuation to the finger. On passing a probe through the outer sinus, bare bone could be felt to a small extent, and it could not be ascertained whether the affected bone was the astragalus or the os calcis. The ankle was poulticed and fomented, whilst cod-liver oil was administered internally. Under this treatment the boy greatly improved.

On January 8th, Mr. Partridge made a more thorough examination whilst the child was under chloroform. He freely laid open the sinuses, and found that the abscess extended from one side of the ankle to the other, apparently behind the joint; the bare bone appeared to be on the astragalus.

March 24th.—Mr. Partridge performed Pirogoff's operation. The os calcis was sawn across obliquely, from above downwards and forwards. The flaps were united by stitches, the angles of the wound being left open. One artery only was tied. The disease was confined to the posterior calcaneo-astragaloid articulation; the tissues in its neighbourhood were in a pulpy state; the ankle-joint was healthy.

25th.—There was some troublesome bleeding, so that the flap had to be let down, and an artery secured.

April 2nd.—A little matter on the outer side of the joint was let out by a small opening.

May 22nd.—Stump quite healed.

In the middle of June the boy could move about the ward without any assistance, a gutta percha boot, lined with wash-leather, having been made for him by the dresser.

GUY'S HOSPITAL.

Alteration in the Structure of the Liver, with Destruction of the Hepatic Cells; Acute Jaundice; Black Vomit.

(Under the care of Dr. Habershon.)

Yellow fever, fortunately, is a form of disease very seldom, or, perhaps, as some pathologists declare, never seen in this country. In the south-western part of Europe it is not unfrequently a visitant, and it is very common in the seaport towns of intertropical America. Again, in south-eastern Europe, in Asia, and in eastern Africa, it is said to be almost unknown. There is no questioning the fact that the influence of climate has a great deal to do with the relative frequency of its appearance in the sites chosen for its ravages. The latter part of summer and beginning of autumn is the season at which it usually appears, after a high temperature of the atmosphere has continued for some two or three months. According to Dr. Wood, of Philadelphia, the disease is rarely met with in a higher latitude than 40° north; the occurrence therefore in this metropolis of an isolated case which presents some of the features of the disease naturally excites the attention of the physician.

Some of the symptoms in this case resembled those of yellow fever, as the details sufficiently show. Thus the most intense jaundice was a marked feature, occurring not quite three weeks before death. There was no indication of fever previously, but this symptom does not invariably occur in yellow fever as witnessed in hot climates. Vomiting ensued one week before admission, (Sept. 2nd,) at which time the urine was loaded with bile. On the 10th, severe vomiting of a dark-green, almost black, fluid occurred, and the abdomen collapsed. On the 12th a semi-comatose condition supervened, with a continuation of the vomiting, which lasted more or less until the 14th, when death ensued.

The patient was a young man of steady habits, and no particular cause was manifest for the presence of the disease. There is this much to be said, that although the course of the malady from first to last would be very rapid for acute jaundice, yet in some cases of yellow fever, where it has run into a protracted typhoid form, death has been known to ensue considerably later than the eleventh day,* although it occurs most usually on the fourth to the sixth day.

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* Dr. Hastings, in his "Lectures on Yellow Fever," (published in Philadelphia in 1848) states that there are some cases which do not terminate fatally for ten days, two weeks, or more. He had treated upwards of 1200 cases in Mexico.

This form of jaundice (if the case is not a modified example of yellow fever) is described by Dr. Budd in his work on the Liver, and similar rare instances are recorded in Graves' "Clinical Medicine," and in the first volume of the old series of "Guy's Hospital Reports," (described by Dr. Bright.) The essence of the disease consists in the alteration in the structure of the liver, with almost total destruction of the hepatic cells, as was found to be present in the following case. Very few hepatic cells could be observed, and those existing had not the usual well-marked cell-wall, but were filled with granules. An abundance of these granules, in clusters, and fatty particles were present in the acini. The liver was small, weighing a little over two pounds, and, on section, exhibited a distinct deep-yellow colour, with the acini well marked.

Dr. Habershon considers the case as confirmatory of the remarks and observations of Dr. Williams, of Swansea, and of Dr. Budd, in this form of jaundice.

William B——, aged twenty-five, admitted on September 8th, 1858. He was a young man of dark complexion, a tailor by trade, of temperate and steady habits, and had resided at Walworth. For several years he had had occasional pain in the lower part of the abdomen, but no definite cause could be found for the present illness; no history of unusual exposure, over-anxiety, or intemperance. Three weeks before admission he felt great lassitude, sense of faintness, and was "ill all over." One week later, jaundice came on, preceded by itching of the skin, and he had also noticed, prior to the discoloration of the skin, that the urine was of a very deep colour. A few days before admission, on September 2nd, vomiting came on; it took place in the morning directly after awaking, and was preceded by a sense of "heaviness in the chest."

On the 8th, he was of a deep icteroid colour; the countenance somewhat anxious, and the mind oppressed and sluggish, but quite intelligent; the body moderately nourished, the tongue clean, bowels confined, the pulse compressible and normal in frequency, the appetite bad, and, except a sense of slight discomfort across the chest, he had not suffered from any pain. The heart and lungs were healthy, the abdomen collapsed, and there was no evidence of any enlargement of the liver, spleen, or gall-bladder; no tenderness in the hypochondriac region. The urine was abundant, and loaded with the colouring matters of bile. A full dose of colocynth and calomel was ordered, but did not produce any action on the bowels.

On the 9th, compound jalap powder was given, and acted slightly; potash with compound decoction of aloes and infusion of calumba were prescribed, but the symptoms remained as on admission.

On the 10th, severe vomiting came on, of dark-green, almost black, fluid. There was no complaint of pain; the abdomen collapsed, the pulse compressible, the mind intelligent.

11th.—The vomiting continued; all aperients and food were at once rejected from the stomach.

12th.—The patient became semi-comatose; the same irritability of stomach continued; the urine passed freely; an injection of castor oil was rejected at once from the bowels; water or any fluid placed in the mouth was only partially swallowed.

13th.—Still in a comatose condition. During the whole of the night he had been moaning or raving; he refused food; the face and hands were clammy and perspiring; the pupils enlarged, but acted sluggishly under the influence of light. There were sordes on the teeth; the abdomen was collapsed, and apparently free from tenderness. Placing fluid in the mouth produced an attempt to retch. The pulse moderately full and sharp, 116; respiration 20. The left eye was partially closed, and there was less movement of the left than of the right arm; urine passed very freely; bladder not distended. A drop of croton oil was placed in the mouth, a blister applied to the back of the neck, and mercurial inunction ordered.

He died on the 14th at one A.M., after partial convulsion.

Post-mortem examination thirteen hours afterwards.—Brain: The vessels tolerably full of blood; the arachnoid in several parts presented slight opacity; the brain substance normal; no excess of fluid in the ventricles. Chest: Slight adhesion of the pleural surfaces was found at the apex of the left lung, and puckering of the lung beneath, with one or two small lobules of iron-grey colour from old disease; the lower lobes of the lungs presented hypostatic congestion. On the surface of the pleura, towards the bases, were several patches of ecchymosis. Heart: Pericardium healthy; heart small; blood dark, fluid, and scarcely any clot in the cavities; valves healthy. The surface of the left ventricle, near the aortic orifice, presented some partial red patches of ecchymosis beneath endocardium. Abdomen: Intestines not distended; the peritoneum healthy; no hernia obstruction, or gall-stone. Liver: small, weight two pounds two ounces; its section of a deep-yellow colour, and somewhat mottled appearance; the acini distinct. There was considerable vascularity of Glisson's capsule, but no distension of the bile-ducts. Under microscopical examination of the liver structure, very few hepatic cells could be observed, and those found did not present the usual well-marked cell-wall and distinct nucleus, but appeared filled with granules. There was a great abundance of granular and fatty particles, and in the acini clusters of granules were observed arranged in lines, as if in the position of the hepatic cells. Some of the minute bile-ducts were also observed full of granules. The gall-bladder contained about two drachms of dark, thick bile; the bile ducts were healthy, and no increase of vascularity existed at the orifice in the duodenum. The stomach contained about a pint of dark-green fluid; the mucous membrane presented numerous particles of arborescent injection, and some ecchymosis towards the cardiac and pyloric extremities, and at the lesser curvature. The examination of the mucous membrane showed considerable injection of the capillaries; some granular colouring matter of blood was observed on the surface of the membrane; the glandular structure normal. There was some grey discoloration of the mucous membrane of the duodenum; the jejunum healthy; ileum presented slight enlargement of some solitary glands at its termination; Peyer's glands not enlarged. In the ascending and transverse colon the solitary glands were generally distinct, and a layer of thick mucus adhered to the intestine. The spleen was slightly enlarged and soft; the pancreas and adjoining glands healthy; so also the supra-renal capsules and semi-lunar ganglia. The kidneys large, but otherwise healthy.

This case had been diagnosed as one of jaundice arising from change of the structure of the liver; and the post-mortem examination confirmed that opinion.

ST. MARY'S HOSPITAL.

Diaphragmatic Hernia, with Symptoms of Pneumothorax; the Stomach, Spleen, Omentum, and Transverse Colon lying in the left Pleura; Fatal Result.

(Under the care of Dr. Alderson.)

The extreme interest which attaches to the displacement of the thoracic viscera, especially to such an occurrence as a diaphragmatic hernia—wherein the heart and lungs are compressed by the stomach and spleen—is so great, that were it not for the length of the following case, we should have devoted more space to its consideration. We glean from the history of the case that the patient had a severe fall two years ago, when, if the opening in the diaphragm were not congenital, the original rent may have taken place, and subsequently have become healed. In an elaborate account of this kind of hernia given by Nélaton,* this point is alluded to in the following words: "When individuals have not succumbed to the immediate effects of a wound or tearing of the diaphragm, they recover, the tear or wound heals, and it is not until some future accident occurs that fatal mischief arises." On reference to the many recorded cases of congenital diaphragmatic hernia, oppression, cough, and pain are found to have been occasionally present; but none of these symptoms were observed in the following case before the second accident. The severe occasional dyspnœa marked the varying pressure on the lung of the right side, and the disturbance to the circulation by the sudden displacement of the heart. A point of interest, worthy of note, is, that in the majority of published cases similar to the following, the hernia occurred on the left side,—a circumstance attributable, no doubt, to the protection which the right side of the diaphragm enjoys from the position of the liver.

For the notes of the following case we are indebted to Mr. A. G. Lawrence, house-surgeon to the hospital.

Thomas A——, aged twenty, footman, was admitted into the Albert ward, on the 29th of July, with symptoms of pneumo-thorax and diaphragmatic hernia. He states that he had always enjoyed good health up to two years ago, when he fell on some ice, and injured his left side; since then he has never felt so well, and has been constantly ailing. Two months back he caught a severe cold, which remained on him a month, and he has been quite free from cough since. On the evening of the 28th, whilst moving from one room to another, his foot slipped, and in trying to save himself from falling, he gave himself a severe twist, when he felt something snap at the lower ribs of the left side, followed by great pain, to such an extent that he could hardly breathe for some minutes. A physician who was sent for, ordered some leeches to the painful part; but as he was no better the next morning, he was brought to the hospital, and admitted at half-past two P.M., under the care of Dr. Alderson. On examination, the front of the left chest appeared very prominent; the intercostal spaces bulging; the heart's pulsation was much displaced to the right side, and could be seen beating between the fifth, sixth, and seventh costal interspaces; the farthest pulsation could be seen to the right side of the right nipple, an inch below it; the breathing was not urgent, the right side moved more than naturally, and there was movement on the left side, particularly at the apex of the thorax, although it did not move nearly so much as the right; the lips appeared quite natural, but there was an anxious expression about the countenance; he complained of slight pain beneath the lower ribs on the left side, which was increased on pressure, but no pain anywhere else; his pulse was small and weak, 105; skin rather cold. On percussing the left side in front, the sound was abnormally resonant, and of an empty-bottle character, but slightly duller at the apex, though remarkably resonant as compared with the other side, which was quite healthy. At the dorsum the percussion was decidedly duller on the same side, as compared with the right, which was quite resonant. On auscultation in front over the left chest, the heart sounds were heard quite plainly, but there was a total absence of the breath sounds, except in the first costal interspace, where a coarse vesicular murmur could be distinctly heard. On the right side the vesicular murmur was unusually loud, and the breathing decidedly puerile; the percussion resonant everywhere, but over the fifth, sixth, and seventh ribs and costal interspaces, one inch to the left, and an inch to the right of the right nipple, where the heart's pulsation could be distinctly seen; the sounds were quite healthy. The patient's bowels were open on the 28th; appetite bad, and he complained a good deal of thirst; he lay chiefly on his back, but sometimes on the left side, and when asked to lie on the right side, dyspnœa came on immediately. He was ordered, aromatic spirit of ammonia, half a drachm; compound spirit of sulphuric ether, twenty minims; camphor mixture, one ounce; every three hours. As his skin was cold and pulse weak, a mustard poultice was directed to be applied to the left side of his chest.—Seven P.M.; Skin much warmer; expresses himself as more comfortable; the pain over left chest much relieved by the mustard poultice; has expressed a desire for another. Has taken a little beef-tea in the afternoon, and tea this evening, and eaten a small piece of bread-and-butter. Is now lying on his left side.—Nine P.M.: The pain under his ribs increased; he is more uneasy, and has been sick for the first time, bringing up half a pint of semi-digested fluid food.—Ten P.M.: Sickness has increased very much. Ordered, tincture of opium, ten minims; dilute hydrocyanic acid, five minims; effervescing mixture, one ounce: every three hours.

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* Elemens de Pathologie Chirurgicale, tom. iv., 1857.

July 30th.—Nine A.M.: The nurse reports that he has complained of being very hungry the whole night, and had drunk a large quantity of water, but has continued to vomit and retch every quarter of an hour, bringing up latterly nothing but thick, ropy mucus. The vomiting now is most urgent every ten minutes. Pulse 110, much weaker; countenance anxious and pale, all indicating some internal strangulation; bowels have been twice relieved in the night, but only slightly; he is very thirsty. A blister to be applied to the epigastrium, and to have iced brandy constantly. Eleven A.M.: The vomiting has abated a little; says he is much easier; the blister has taken a good deal of the pain away; looks less anxious. Half-past one P.M.: He has had no vomiting for the last half hour; the bowels have been well opened; has taken a little beef-tea, but keeps it on his stomach only a few minutes. Vomiting is again becoming urgent, and the pain increasing under the ribs, especially on pressure, and now extending over the whole abdomen. Four P.M.: The vomiting still continues; drinks a good deal of iced brandy-and-water, but brings it up immediately; drinks an immense quantity of water; complains of very great cold and shivering; pain more severe beneath the ribs. Seven P.M.: Although ordered not to get out of bed, has got out to the night-chair when the nurse had turned her back. As she was about to put him into bed, he said, "Catch me, I am going," and fell into her arms. He was found in a cold, clammy sweat; no pulse at all; dyspnœa not urgent. He wandered, and took a little brandy, but as soon as he took it he brought it up again; had much greater difficulty in swallowing, and could only take half a teaspoonful at a time; it did not seem to go farther than the bottom of the œsophagus, and was then rejected. A large quantity of a thick, black fluid, like digested blood, was now brought up. He recovered consciousness, and said he had a sharpish attack, and that his stomach felt as if it were full of water. Still no pulse; looked more haggard. He then rallied a little in strength, but still wandered a good deal. Pulse now hardly perceptible; continued to bring up the thick, dark fluid until half-past nine. He died at forty minutes past three P.M., thirty-two hours after admission, and about fifty-one hours after the accident.

Post-mortem examination.—The body appeared that of a well-grown muscular young man. The face was congested; there was no mark of injury except over the right eye. The rigor mortis was present, and very strong in the lower extremities. The left thorax was much distended, and resonant on percussion; on making a puncture into it, a strong gush of air, having a fœtid smell, took place. On removing the sternum, the heart was seen to be displaced quite to the right side, so as to compress the corresponding lung and force it backwards; it was on a level with the margin of the sternum, and reached to about two inches and a half beyond the costal cartilages of the right side; beyond this displacement its position was not altered. On opening the pericardium, its membrane was seen to be very much injected, and contained about an ounce and a half of sero-purulent fluid; at the base of the heart were flakes of lymph, and posteriorly the pericardial layers were adherent, but readily separated. The heart weighed thirteen ounces; the right side contained black coagula, which extended into the veins for a considerable distance, and into the pulmonary artery; the left ventricle was firmly contracted, so that its cavity was reduced to a mere fissure; it contained scarcely any blood; valves quite healthy. The right lung was partially contracted from pressure upon it by the heart, everywhere slightly crepitant, but excessively engorged; a little fluid in the pleura. The left pleura contained fully six pints of black and rather thick fluid, in which pieces of food were floating; it had the appearance of semi-digested blood, and smelt offensively. When this was removed, the lung was seen lying at the posterior and upper part of the thorax, quite collapsed and free from air, except just along the margin; it was completely carnified, and there was scarcely any blood in its vessels. At the lower part of the left chest, protruding through an opening in the diaphragm, was found the whole of the stomach, with the great omentum, the larger portion (from ten to twelve inches) of the transverse colon, and the spleen. The stomach and spleen were lying posteriorly on the ribs, and the omentum and transverse colon in front of them: this portion of intestine was distended with flatus, and contained fæcal matter; it was very pale, and nowhere presented marks of constriction. The spleen was pale, but healthy; the omentum the same, except at a spot which was in contact with the stomach, where it was black and discoloured. The stomach was collapsed, nearly empty, and lying with its greater curvature turned upwards; the œsophagus forming a very abrupt curve, with its convexity downwards. On the posterior surface near the lower margin, and at the cardiac extremity, the coats of the stomach were much thinned, and had given way at one point, forming an opening the size of a half-crown piece. On opening the stomach, it was found to contain some dark semi-fluid material, similar to that in the cavity of the pleura, which was partially-digested blood; this would seem to have escaped from a large branch of a vessel which could be traced to the ulceration, and to have been opened by it. On removing this, the mucous coat was found rather reddened, and thrown into numerous rugæ. The opening in the diaphragm was in the left portion of the tendon, near its posterior part; it was large enough to readily admit the hand; its margins were rounded and thickened, and the serous covering of the fissure seemed continuous with the pleura on one side and the peritoneum on the other; it was quite perfect except at the left border, which appeared to have been lately torn to the extent of an inch: this opening in the diaphragm commenced about an inch and a half to the left of the œsophageal opening. The peritoneum was everywhere exceedingly pale, and contained a fluid precisely the same as that in the pleura, to the amount of two or three pints; there were old adhesions at the upper part, from old peritonitis. The other organs were quite healthy.

ROYAL FREE HOSPITAL.

Penetrating Wound of the Abdomen with a pair of Scissors, and Protrusion of the Bowels, in a Child of Five Years; Fatal Result.

(Under the care of Mr. Alex. Marsden.)

Wounds of the abdomen are grave under any circumstances, but they become the more so if any of the viscera have been injured. If the latter have escaped injury, and are protruded through the wound, although the case is somewhat serious, there is, nevertheless, a chance that the symptoms of inflammation may be less severe than if the intestines were wounded, and the patient may escape with life. But the prognosis is generally most serious, as was proved by the following case:

A little girl, five years of age, early on the morning of the 12th of September, was thrown down by a table falling upon her, upon which was a pair of scissors. In some unaccountable manner, the points of the scissors were driven by the force of the table into the abdomen, producing a V-shaped wound an inch long, in the left lumbar region. Through this protruded between two and three feet of small intestine. She was at once taken to the hospital, and on admission the bowels were carefully examined by Mr. McGregor, the house-surgeon, who, finding them to be unwounded, although scraped a little at one portion, reduced them without any difficulty, sewed up the wound, and carefully bandaged the abdomen. She was kept quiet, was allowed milk and ice, and opium was given by the house-surgeon.

The next day, the little tenderness which was present over the wound had almost disappeared; she had been sick a few times, but, on the whole, was doing pretty well, being free from any pain, even on considerable pressure, and her bowels were open. Her face had somewhat of an anxious expression, and her pulse was rather frequent and full. This was at three o'clock in the afternoon. About half an hour afterwards, she became suddenly exhausted, and died without any apparent suffering.

At the autopsy, well-marked appearances were present of active peritonitis, shreds of recent lymph were thrown out, but the bowels were intact and unwounded, as was originally surmised.

What is remarkable in this case is, that the general symptoms of peritonitis were extremely mild, considering the nature of the injury—so much so, that at one period it was hoped she might recover. Her countenance, however, bore an expression of anxiety, with a dark halo around the eyes, which, taken with the character of the pulse, gave cause to fear the worst.

ST. BARTHOLOMEW'S HOSPITAL.

Fistula Communicating with the Colon.

(Under the care of Mr. Coote.)

When an abscess is clearly ascertained to exist between the abdominal parietes, it should, if possible, be opened early; because, if it be overlooked, the patient runs the risk of its bursting into the peritoneal cavity. This will be the more readily understood when it is recollected that the abdominal walls are very unyielding, owing to the large amount of tendinous structure entering into their formation.

Very recently, a man, thirty-four years of age, was admitted into St. Bartholomew's Hospital, with an abscess situated in the right lumbar region, which had been forming during the long period of eighteen months. It commenced with pain, following convalescence from typhus fever, or possibly typhoid fever, with, very likely, ulceration of the cæcum and colon, and the formation of an abscess, which gradually insinuated itself between the parietes, and ultimately burst. Mr. Coote would not open it when the patient was admitted, as there was a suspicion that it might be in connexion with important structures; and so it proved, for on the evacuation of its contents, when it burst, it was found to communicate with the ascending colon. The discharge of fæcal matter has now become much less than at first, and the fistula exhibits a disposition to contract.

This case reminds us of one in the Middlesex Hospital, some months back, under Mr. Shaw's care. The patient (a woman) had a fistulous opening communicating with the cæcum, which was attributed to a kick from a horse, received six years before. An abscess formed, and burst two years previous to entering the hospital, and had discharged pus ever since. The fistula presented a very raw surface, and was of some magnitude.

Although these fæcal fistulæ are often successfully closed either by nature or by operation, yet they will sometimes reopen when least suspected. A case of this kind occurred in a soldier, who was wounded in the right loin by a musket-ball at the battle of the Alma. A fistula formed in the situation of the wound, which healed up. It reopened, and discharged feculent matter. He was then in Guy's Hospital, under Mr. Birkett's care, who succeeded, we believe, in closing it.

Though not immediately connected with the subject of fistula, we may here mention that there is at the present time, in St. Bartholomew's Hospital, an instance of psoas abscess, occurring in a lad, in whom the abscess has pointed and burst in each groin.

CHARING-CROSS HOSPITAL.

Case of Hysterical Paralysis in the Male Sex, affecting the Hand.

(Under the care of Mr. Barwell.)

As a rule, hysteria is almost exclusively confined to women; yet we do now and then meet with undoubted examples in the opposite sex, although it would be ridiculous to apply the term to the latter in its etymological sense. Tate, who wrote his monograph on Hysteria some thirty years ago, does not even allude to it amongst males. Many writers, however, since his time have recognised and described this disease in the male sex. The following case, of much interest, we had the opportunity of lately seeing and examining at this hospital:—

J. W——, aged thirty, unmarried, applied at the above hospital on August 18th, 1858, with loss of motion of certain parts of the left hand. It appears that he has never drunk to excess, but has led a somewhat dissolute life. He has never been able to sleep much, and three or four hours in the twenty-four satisfy him. He is of middle size, has dark hair and whiskers, grey eyes, is of a pale, flabby appearance, and wears a heavy, sullen, though not a morose look. A fortnight before the patient's application to the hospital, he was at a public-house, when, in some squable, a woman bit him on the left arm, just above the inner condyle. The teeth did not puncture the skin, yet he declares that he immediately felt giddy, reeled, fell, and nearly fainted; at the same moment he felt pain shoot along the arm to the thumb and fore and middle fingers, since which time he has not been able to bend them.

The diagnosis of this case is founded not merely upon the history, but chiefly upon a careful examination of the condition of the parts paralysed, and upon consideration of the nervous supply of the muscles affected. A minute description, therefore, of these circumstances will be not only necessary, but also highly interesting.

When the patient is holding the hand in its ordinary posture, the thumb and the index and middle fingers are quite straight; the other two slightly flexed. When told to bend the index or middle finger, he at once says he cannot, and it remains unmoved. If told to flex the little and ring fingers, he partially does so, and bends at the same time the middle finger to some considerable degree. He can oppose the thumb to the little finger, and bend its first phalanx, but not the last. All the immovable parts, when bent by the surgeon, resist and fly back to the straight posture as soon as released. When he is made to bend the inner fingers as much as possible, and to cross the thumb over them, he still declares that he cannot bend the index, but the abductor indicis is felt quite hard and tense, showing the action of the extensor muscles to keep that finger in the position of pointing. Neither the forearm nor hand is wasted in any marked degree.

Now, it is pointed out by Mr. Barwell that this paralysis is not consistent with anatomy. The median nerve supplies not only the superficial flexor of the fingers, but also the muscles of the ball of the thumb and its long flexor. Thus paralysis of this nerve would deprive of power the two outer fingers, and would greatly injure the inner, but then it would also deprive of muscular action the ball of the thumb. The long flexor of the thumb is paralysed; but as the short one retains its power, this cannot be attributed to interruption of nervous supply, since both muscles are dominated by the same nerve; the active condition of the abductor indicis, likewise supplied by the median, is another anomaly, also the active condition of the flexor carpi radialis. It is out of the question to account for the condition by the paralysis of any other nerve, since such malady would not influence the power of flexion in either fingers or thumb. Progressive muscular paralysis is hardly to be thought of in connexion with this case; for not only does the history with the sudden commencement of the disease negative it, but also the hard and unwasted condition of the parts.

On reviewing these facts, considering the inadequate history, and the nervous condition a man must be in who, when bitten so slightly that the skin is not broken, yet falls and almost faints,—examining also the expression of sullen suffering (hypochondriasis) of the man's face, and considering also that he has led a dissolute life—Mr. Barwell has come to the conclusion that the disease is the very rare one of hysterical paralysis in the male.

The patient is still under treatment, and is getting better. The result and treatment of the case will be given in a future number.

MIDDLESEX HOSPITAL.

Impaction of a Crumb of Bread in the Larynx of an Infant; Threatened Suffocation; Tracheotomy.

(Under the care of Mr. Mitchel Henry.)

The fact is very well known that sometimes, when a foreign body—a piece of food, for instance—suddenly gets jammed in the rima glottidis, the person turns blue in the face, and drops down dead. Surgical aid, no matter how prompt, is mostly useless under such circumstances. If, on the other hand, the foreign body passes beyond the rima, and enters the trachea, the symptoms will be more or less urgent according to its situation, although there is not such imminent danger to life as in the first-named condition. We saw an example of the latter in a female child aged seven months, who was brought into the hospital on the 22nd of September. She had been sucking a crust of bread, and began to cough, when suddenly, by a forcible inspiration, a crumb was drawn into the larynx, which produced symptoms of difficult breathing almost amounting to suffocation. Half an hour afterwards the mother took the child to the hospital, when it was found necessary, from the urgency of the case, to perform tracheotomy, which was at once done by Mr. Rix, one of the house-surgeons. The crumb of bread, however, could not be discovered. The child now breathed much more easily, although still in a precarious state. The opening in the trachea was kept open by means of curved wires at either side, passing backwards round the neck, where they were tied. The danger sometimes arising from the clogging up of the long curved silver tubes was thus avoided; and, so far as could be seen, the child seemed more comfortable than if the tube was employed.

Next day, although there was still some mucous secretion, we learnt it was not nearly so much as it had been, and the child had taken the breast several times with ease and comfort. The crumb of bread, in whatever situation placed in the windpipe, would no doubt soften, become disintegrated, and be removed by expectoration.

The child went on favourably up to the evening of the 25th, when the secretion of mucus became excessive, and it seemed evident that the crumb of bread had become lodged most probably in one of the bronchi, and had now produced symptoms which left no hope for life; and death ensued on the 26th.

There were two circumstances against recovery in this child—viz., its age, and the lodgment of the foreign body, which it was hoped would have been ejected after a time by coughing, as it was presumed it would soften and break up. Usually, when a foreign body is removed by tracheotomy, all other circumstances being favourable, recovery takes place. It is, again, almost invariably the reverse when resorted to for croup.

UNIVERSITY COLLEGE HOSPITAL.

Popliteal Aneurism recurring in the left Ham, a few weeks after cure by compression in the right Ham; Cessation of Pulsation in fifty-six hours.

(Under the care of Mr. ERICHSEN.)

George W——, aged thirty-three, a servant in her Majesty's household, was admitted into this hospital on August 25th, suffering from popliteal aneurism in the left leg. He is of spare habit, five feet ten inches in height, with light hair, fair complexion, cheerful countenance, and his general appearance indicates good health. He is married, and has healthy children. His father died of renal disease, and his mother of apoplexy. His particular avocation was trimming candelabra, and placing them on tables, which, being broad, obliged him to stand on tiptoe and lean his body forward, putting the popliteal regions on the stretch.

On July 28th, he was discharged from this hospital, cured of the like complaint in the opposite ham.

The history of the present case dates from August 21st, when the patient's attention was directed to a throbbing behind the left knee-joint. During the day a circumscribed pain supervened, with stiffness of the joint. The pain and stiffness were relieved, and the limb became easier, after walking about for a few minutes.

Aug. 22nd.—Pulsation and pain, with stiffness, increased. A small swelling was perceptible in the ham, which, on straightening the limb, could be distinctly seen to pulsate.

23rd.—No perceptible increase in the size of the tumour; pain more diffused in character.

24th.—Saw Mr. Erichsen, who told him to come into the hospital again.

25th.—The patient was admitted into the hospital. A tumour about the size of a small walnut was distinguishable near the outer boundary of the popliteal space, exhibiting the usual signs of aneurism. Mr. Erichsen was of opinion that it had sensibly increased within the last twenty-four hours; pain was limited to the seat of swelling. At half-past five P.M., after bandaging the limb firmly from the foot to a few inches above the knee with an elastic bandage, two of Carter's elastic tourniquets (the same as were used on a former occasion) were applied on the femoral artery, the one about five inches below Poupart's ligament, and the other immediately below the ligament; the lower tourniquet was screwed up first. In an hour and a half, pulsation had perceptibly diminished; tightening the tourniquet increased the pain, which continued about half an hour, when it entirely ceased. There was a feeling of fulness in the tumour for a few minutes. One hour after, a creeping sensation was felt, extending from the ankle up the inner side of the leg to the knee.—Half-past eight P.M.: The upper tourniquet was screwed up. On removing the lower compressor, the patient complained of a glowing sensation round the knee, which was momentary. Subsequently the tourniquets were alternately screwed up every hour and a half or two hours.

26th.—Half-past one A.M.: The patient screwed up the upper instrument so far that he could not feel any pulsation in the tumour; but on examination pulsation was very distinct, which was obviated by another turn or two of the screw.—Two A.M.: Severe pain was experienced in the tumour, and down the centre of the leg, reaching the ankle; the patient described it as a feeling of pressure, then of expansion, which gradually subsided, resembling the former sensations he had when the aneurism in the opposite leg was solidifying, only of less intensity. These sensations were experienced at different periods, and with tolerable frequency. Shortly after, distinct shooting pains were felt close to the inner side of the knee: these were repeated seven or eight times, and at intervals of a few seconds; they appeared to result from pressure on the cutaneous nerves. The removal of the upper tourniquet gave relief.—Three A.M.: A feeling of heat about the knee-joint and front of the leg, especially over the shin, supervened, and a trickling sensation was referred by the patient "to the veins."—Six A.M.: Slight pain in the tumour and down the back of the leg continues; patient states that he has an occasional feeling of increased temperature, traceable from below the knee to a short distance up the thigh.—Half-past seven A.M.: The tourniquets are changed every hour; no perceptible difference in the temperature of the two limbs; the pain in the tumour is of a wavy character; the application of the upper tourniquet now causes more pain.—Eleven A.M.: Lower tourniquet screwed up; pulsation very evident in the tumour, which ceases on the compress being tightened; the patient does not complain of any pain, and has had several snatches of sleep.

The patient, who had been allowed to adjust the instruments at his own discretion, passed from the present time to midnight of the 27th, without anything of importance occurring.—Half-past eleven P.M.: Lower tourniquet applied; distinct pulsation in the tumour. In addition to the tourniquets, compression was now tried with the fingers on the external iliac, which stopped any further pulsation in the tumour and main artery below; irritability of the skin prevented compression being kept up more than twenty minutes; on its removal, pulsation returned in the tumour.—Midnight: Upper tourniquet screwed up; shortly after, pain of a filling character supervened in the tumour; it gradually became so intense, accompanied with numbness of the leg, that the tourniquets were obliged to be changed again; pain and numbness relieved; a thrilling sensation from the middle of the thigh to the knee ensued.

28th.—Half-past one A.M.: Extreme pain and absence of pulsation in the tumour; leg very numb; tourniquets changed every twenty or thirty minutes, on account of pain in the tumour, and at the seat of pressure; a small superficial artery can be felt pulsating over the tumour; patient frequently observed a trickling sensation from the inside of the knee to the tumour; the foot is cold, which is the only appreciable point of difference in the temperature of the two limbs.—Ten minutes to four: Tumour pulseless and painless; a slight pain of a filling character in the centre of the knee. During the day darting pains occurred from time to time, extending from the foot to the knee, causing the patient to start.

29th.—Bandage taken off, and tourniquets relaxed; the tumour is firm and pulseless; an internal articular artery can be felt pulsating on the inner side of the patella and knee-joint.—Half-past four P.M.: Tourniquets removed; no pulsation; limb comfortable; temperature normal. A pad of cotton wool being placed over the tumour, and along the front of the tibia, a bandage was firmly applied to a short distance above the knee.

Sept. 1st.—Tumour pulseless; the popliteal artery can be felt for a short distance above and below the tumour, of cord-like consistence.

3rd.—Discharged cured.

Clinical Records.

ABSORPTION OF HYDATIDS BY IODIDE OF POTASSIUM.

HYDATIDS are found to be more common in the liver than in any other organ of the body. Sometimes they are known to be present in the lungs, or perhaps the cavity of the pleura, as in a well-marked example which we saw in Guy's Hospital two years ago. The patient was an Italian, thirty-six years of age, under Dr. Hughes' care, and was admitted on the 12th of March, 1856. He was tapped on the 28th of April by Mr. Birkett, the wound healing up by the next day. The fluid withdrawn was that of an hydatid, but no circlets of the animal were found.

Very lately, amongst the out-patients, a female presented herself with a large abdominal tumour, which proved to be an hydatid developed within the liver. The poor woman was most anxious to get well without any operation, and Dr. Wilkes tried the influence of five-grain doses of the iodide of potassium, given three times a day, the patient refusing to come into the hospital. She was carefully watched for a short time, when it was found that complete absorption of the swelling ensued, and the woman expressed herself as quite relieved. Whether the animal was poisoned by the iodide, and absorption ensued, as in a case of ordinary dropsy, or that it remains still alive notwithstanding the actual occurrence of its dispersion, is a question which time alone can determine. The fact, however, may prove useful, as showing that the fluid of hydatids does become absorbed by the external use of this medicine, uncombined with any other treatment.

FRACTURE OF THE ARM.

A YOUNG man in the Middlesex Hospital, now under the care of Mr. Nunn, fell from some scaffolding at a height of fifty feet, breaking two posts in his fall, and sustaining a fracture of the right humerus. This occurred the first week in September. A most singular circumstance connected with the case is, that the patient did not lose his consciousness at the time of the accident. The fracture was associated with very great swelling, the arm no doubt having acted as a check to the force of the fall. This swelling was removed in a short time by the use of arnica lotion, and union of the bones is now complete.

In the next bed to this patient is a young man who fell on a wooden spike, which entered his right groin and passed into the abdomen beneath Poupart's ligament. This was followed by some amount of emphysema, but the patient is doing well. There is an ulcerated surface at the site of the wound, which seems healthy and discharges a little matter.

These accidents, which threatened to be so serious, we think worthy of note, from their turning out so well.

A FINGER GROWING INTO THE PALM.

A RATHER unusual result followed an old thecal abscess in an elderly woman who was admitted into Guy's Hospital. The middle finger of the left hand had gradually and slowly become bent, after the occurrence of the abscess many years before; this increased until the finger-nail pressed into the palm, and it was now absolutely penetrating the skin, the joints being in the most complete state of rigidity and contraction. It was utterly impossible, with the greatest effort, to straighten this finger; and as the palm of the hand was much inflamed and in a state of eczema, Mr. Cock recommended amputation of the digit, which was performed on the 24th August, at the metacarpo-phalangeal articulation. The removal of the finger has been attended by the best results, as the irritation of the skin has disappeared, and the poor woman will have a useful hand. It is a question whether, in such a case as this, subcutaneous division of the tendons would have been of any service; it is most probable that if the finger had been straightened by tenotomy, flexion would have been lost; and the course pursued was evidently the best. The tendon of the flexor-profundus digitorum of the middle finger, together with the lumbricales and interossei muscles in immediate connexion, were in this instance affected by the old disease.

A case of disease of the index finger of the right hand, in St. George's Hospital, which had ensued from a thecal abscess occurring three weeks previously, in an elderly woman, was amputated below the metacarpal articulation, by Mr. Cæsar Hawkins, on the 14th instant. The inflammation had been so active as to destroy all the bones of this finger; there was extensive suppuration, four or five prominent red tubercles leading to the interior. The finger was not only greatly swollen, but presented a peculiar twisted appearance like the claw of a bird.

THE USE OF ELECTRICITY IN DENTISTRY.

VERY recently the value of electricity as a local anæsthetic was put to the test, at University College Hospital, in the extraction of a number of teeth; and from some notes taken by Mr. T. C. Kirby, one of Mr. Erichsen's dressers, we glean the following information:—

About forty teeth in all were extracted, principally by Mr. Harding, of Regent's Park. The patients were seated in a chair opposite the battery, the operator standing on their right side, holding the forceps, connected with one pole of the battery by a wire conductor; and as the extracting instrument was applied to the root of the tooth, a handle, likewise connected with the battery by a flexible wire twist, was thrust into the hand of the patient, on the same side as the tooth to be extracted, and as the handle was grasped, the tooth was withdrawn. On asking the patient afterwards of his suffering, the reply in almost every case was, that a numbing feeling ran along the arm and in the fingers on taking the handle, and this was all that was felt. In the experiments by Mr. Harding, he gave the word to Mr. Kirby when ready, the handle was thrust in the patient's hand, and the tooth was extracted, and nearly every case was successful and satisfactory in being free from pain.

A policeman had the first bicuspid tooth taken out on either side: with the first one, the wire was connected with the battery, and with the other (right anterior bicuspid) it was not, and he was not informed of the difference. He gave the most unequivocal demonstrations of pain with the second, declaring that he did not suffer with the first operation.

The battery used was a pair of plates (Smee's), connected with the ordinary multiplying arrangement, and the index-hand was placed at the lowest figure. The strength: one part of commercial sulphuric acid to forty parts of water, and only a fourth of the plate was covered by the diluted acid.

It may be said that the electric current in the foregoing operations, if it did not entirely remove the pain, at least rendered it perfectly tolerable, and it must be remembered that this effect is certainly influenced by the dexterity in the manipulation of the operator. Judging from these cases, very little pain indeed is experienced in extracting teeth submitted to electric shocks.

UTERO-GESTATION AND VARIX.

WHEN the circulation of the blood is retarded by any cause, such as tumours pressing upon the veins, habitual constipation, or standing for any length of time, as is necessary in many occupations, a varicose condition of the veins of the leg is very commonly the result, examples of which are frequently seen amongst the out-patients at all our hospitals. The gravid uterus is equally a cause of this condition, and frequently affects not only the veins of the leg, but also those extending upwards to the thigh, the labia, and occasionally the abdominal parietes. When thus extensive, as is seen in some instances in the latter months of pregnancy, the varicose condition is, perhaps, of more diffused character, principally affecting the cutaneous veins in this situation, and often proving of serious inconvenience to the patient. We lately saw, in the Middlesex Hospital, under Mr. Shaw's care, a woman, about six months advanced in pregnancy with her second child, with her legs in this state, and also the labia, but the varix seemed to have considerably diminished by quiet and rest since admission; she may, however, be much inconvenienced at a future time, when she approaches the period of parturition. The pressure producing such a condition here is but temporary, and when that is removed the varix will disappear; nevertheless, instances do occasionally occur in which it remains permanent, having first appeared on the occasion of pregnancy. In this class of persons, there is a uniform weakness or want of tonicity in the general structures of the body, which would of course implicate the veins. The best treatment in the varix of pregnancy is, gentle bandaging, and a strict attention to the regulation of the chylopoietic viscera.

MORTIFICATION OF THE FOOT FROM RHEUMATIC ENDOCARDITIS, AND ITS RESULTS.

About two years and a half ago, a young man, aged twenty-six years, was a patient in St. Bartholomew's Hospital, with spontaneous gangrene of the left foot, the result of valvular disease of the heart, consequent upon rheumatic endocarditis. He was at first under Dr. Hue's care, and was subsequently placed under Mr. Lawrence. All the metatarsal bones and phalanges of this foot were destroyed, with a portion of the sole to the extent of some inches, and he left the hospital with the stump healed. It was supposed at the time that one of the main arterial trunks leading to the foot was plugged up by a detached portion of fibrine, possibly from the valves of the aorta, and so interfered with the circulation as to produce gangrene of the toes. The stump, although healed when he left the hospital, remained very tender, and would break out every now and then, which caused him a great deal of pain and uneasiness, especially when at work as a bricklayer's labourer. He again entered St. Bartholomew's, and was anxious to have his foot taken off, which was performed by Mr. Coote in the middle of September. The leg was atrophied, and not in such a healthy condition as the other one, and it was feared that, unless it was taken off high up below the knee, the circulation would hardly be sufficiently strong to permit of healthy union. All fears of the kind were dissipated during the operation; for all the parts were most liberally supplied with blood, and the man's progress since has been of the most satisfactory kind.

Such a case as this would seem to prove that rheumatism, although at all times a complicated and troublesome affection, is occasionally followed by very serious effects. Instances are, however, rare in this country of the sudden occurrence of mortification in distant parts of the body, from the rapid plugging up of some particular vessel by a mass of fibrine. They are said, however, to be by no means uncommon in some of the southern states of Europe, especially in Italy. The responsibility of the physician becomes the more increased when there is extensive disease of the valves of the heart in rheumatism.

OSSEOUS NEURALGIA.

There is a delicate-looking girl at present in King's College Hospital, twenty-one years of age, under Mr. Henry Lee's care, who has been a great sufferer from pain in her right arm. It commenced, about eighteen months ago, at the lower and back part of the humerus, and shortly afterwards the bone began to enlarge above it. On her admission, the pain was of a dull, aching character, occasionally darting upwards to the shoulder, then down again to the fingers. This pain was relieved by pressing the cartilages of the joint together, thus showing, at any rate, that there was no disease of the articulation, although, from the appearances of the swelling, &c., a surgeon outside the hospital pronounced the joint involved.

On the 2d of October, Mr. Lee made an incision over the enlarged bone, cutting through the triceps muscle, and trephined it with a small instrument, and, after penetrating a certain distance, the trephine slipped into a cavity, from which was removed a small piece of softened bone. On the 4th, the wound was discharging freely, and there was no recurrence of the old pain, although some uneasiness was present. A few days later, pain had wholly disappeared, and the poor girl looked cheerful, having lost the anxious aspect which she had long presented.

In such cases as this, where a sort of agonizing pain, resembling in some respects that from a carious tooth, is persistent, the best and most satisfactory course, as clinical experience proves, is, to trephine over it, and remove a portion of bone even when no actual cavity is present; for there can be no doubt that the osseous structures sometimes become distended, and painfully compress the minute nerves of the bone, and relief is at once given by employing the trephine in the way above-mentioned.

EPITHELIAL CANCER.

An interesting case has lately occurred, under the care of Mr. White Cooper, at St. Mary's Hospital, rendering necessary this formidable proceeding.

The patient was a farmer from Somersetshire, aged fifty-seven, cachectic in appearance. Nearly four years ago, his left eye became inflamed, and continued irritable. After a time, a red patch appeared near the inner canthus, and remained, despite the free use of caustic and other applications. Gradually, the whole surface of the eye became red and the sight was lost, from the opacity of the cornea. He came twice to London for advice, the last time in the spring of this year, when a small growth had made its appearance on the free edge of the upper lid, near the punctum, and from this an adhesion extended to a similar growth on the eyeball, near the caruncle. These growths were removed, and palliative treatment adopted. For six weeks the eye remained comparatively quiet, and giving little uneasiness, but at the expiration of that time the growth from the lid began to increase rapidly, and notwithstanding that it was repeatedly removed and freely cauterized, it attained the size of a walnut. He therefore again came to London, and placed himself under Mr. White Cooper, at St. Mary's Hospital. On Sept. 25th, the parts presented the following aspect:—A growth as large as a walnut sprang from the margin and inner surface of the upper eyelid, involving the caruncle, whence it spread over the surface of the eye. Its surface was ulcerated, discharged a sanious fluid, and bled on the slightest touch; consistence of a cartilaginous hardness. Two-thirds of the lid were implicated in the tumour, and the diseased structure involved not only the whole front of the eye, but the conjunctiva lining the lower lid, which was ulcerated.

The case was regarded as one of epithelial cancer, and on the 27th, Mr. Cooper proceeded to remove it. With scissors, he first detached the upper lid along the orbital margin, then dissected out the eyeball, and lastly, removed the lower lid along its orbital line. The bleeding was free, but yielded to pressure and the application of ice.

Not a bad symptom supervened, and the patient was discharged from the hospital at the end of a fortnight, the wound having healed most kindly. The disfigurement was much less than might have been expected, and was not greater than in cases where the lids have fallen in over a sunken eyeball.

The characteristics of epithelial cancer were well displayed in the tumour, which was composed of epithelial scales, many caudate and fusiform heaped up together.

This case is one of great rarity and interest. The free extirpation practised has yielded the happiest temporary result. It will be a matter of interest to know the further progress of the case.

COMPOUND FRACTURES.

THE most common surgical injuries met with are fractures of the various bones of the extremities, which are well illustrated in all our hospitals, but perhaps seen in greater number at the London and Borough Hospitals, from their contiguity to the scenes of their most frequent occurrence—namely, the Docks and banks of the Thames. When the fracture is compound, and sometimes seriously comminuted, although an effort may be made to save the limb, if mortification should set in, or a disposition to non-union be evinced, then amputation is had recourse to, as in the following case at Guy's Hospital:—

James R——, a labourer, aged forty, a healthy, temperate man, was admitted on the 25th of September, 1858. A heavy sheet of iron fell on his left leg, and produced a compound comminuted fracture of the tibia and fibula, about the junction of the middle and lower third. There was great contusion of soft parts, but little bleeding. Several fragments were removed, the limb arranged on pillows, water-dressing applied, and opiates and stimulants administered. Sloughing of the soft parts commenced about the 30th of September. Irrigation was adopted, but the disease extended, and it did not seem probable that, with the loss arising from sloughing, and the loss of bone, even if the injury were repaired, a useful limb would be the result. The powers of the patient being good, amputation was performed below the knee on the 5th of October. Since the operation, the man has been doing well.

A fortnight since, at the Royal Free Hospital, we were shown an old man, sixty-nine years of age, who had sustained a compound fracture of both bones of one of his legs. He was in an extremely anæmic condition when admitted, took his food badly, and the fracture would not at first unite. Mr. Cooke put the leg in splints, suspended in a swing cradle. A large slough formed under the heel, and he seemed in a very unsatisfactory condition. By the use of tonics and generous diet, however, he began to rally, callus was thrown out, and perfect union of both bones was obtained. He is now going about the wards with his leg put up in a starch bandage, and will shortly be discharged.

GUTTA PERCHA MOULDED SPLINTS, IN DISEASED HIP-JOINTS.

ON a recent visit to the Royal Orthopœdic Hospital, we witnessed a plan of treatment, adopted by Mr. Brodhurst in cases of chronic disease of the hip-joint, which deserves some notice, especially as the results on the whole seem so very satisfactory. It consists in applying gutta percha, when softened by heat, over the affected hip and thigh, moulding it to the shape of that part of the body, at whatever angle the thigh may be flexed at the time, and then applying a bandage over all. From the quiescent condition of the parts thus effected, together with the support afforded to the limb, the diseased joint becomes improved, and the thigh gradually assumes its normal position; and as this is gained, so is the gutta percha re-applied a few times, until a cure is effected. We saw several cases of chronic disease of the hip-joint undergoing this method of treatment; amongst them several children, in whom the disease had been existing some time, and who were at first in such an extremely irritable condition that their limbs could scarcely be touched without eliciting screams. They have now attained their natural position; the patients can walk, and bear pressure on the limbs; their general health has improved, and they can bear a close examination.

The advantages, therefore, of gutta percha are—that it is convenient of application; it is much cheaper than the instruments in use, with cog-wheels, &c.; it prevents motion effectually; it keeps the parts at perfect rest, and, by acting as a support, at the same time assists nature in perfecting a cure. This is also facilitated by attention to the general health.

A few weeks back we counted, in one ward alone at St. Bartholomew's Hospital, five cases of diseased hip-joint, in boys from six to eleven years of age, under Mr. M'Whinnie's care, who at the time had charge of Mr. Lloyd's patients. All were being treated by rest and attention to the general health.

GELATIAL ANÆSTHESIA.

In many small operations, of a character sometimes too trivial for the administration of chloroform, we have seen the parts to be operated upon completely frozen by the application of a mixture of pounded ice and salt. This mixture, as employed, did not at all times freeze the part, because, in the irregular manner in which it had been prepared, with the presence of portions of ice nearly as large as marbles, it would almost become a solid mass, and thus its local influence on the skin or applied part was almost valueless. For the last three years, Mr. Henry Thompson has been in the habit of using a mixture of *powdered* ice and fine salt, the ice in all respects being of the consistence, and to some extent lightness, of snow. This very readily mixes with salt, and a mixture is obtained which produces congelation in from two to three minutes. We saw it applied over an abscess on the left breast of a young man in University College Hospital, on the 13th instant, when in two minutes the skin became quite white and perfectly frozen. The abscess was then opened by Mr. Erichsen, and the pus flowed out, no pain whatever being felt. Now if this mixture is to be used, it should be made properly: the powdered ice can be obtained on the instant by rubbing a piece of ice along an instrument for slicing cucumbers, such as Mr. Thompson is in the habit of using, and which was employed in University College Hospital; one or two teaspoonfuls of fine salt are then stirred up with the ice, the mixture put in a piece of fine muslin, and then applied to effect congelation. It is not necessary to carry the freezing process further than simply to produce whiteness of the part, when the knife may be used. We may remark that this form of gelatial anæsthesia is especially suitable for such an operation as evulsion of the toe-nail, which otherwise is exceedingly painful; and we believe that one of the recorded cases of death from chloroform occurred during the removal of a toe-nail.

STARCH BANDAGES FOR VARICOSE VEINS AND ULCERS.

For some time past, the following method, in the treatment of varicose veins of the leg, occurring either as a specific affection or associated with ulceration, has been adopted at the Great Northern Hospital, by Mr. Price:—The leg which presents the varicose condition is firmly encased in a bandage, which is saturated with a mixture of starch and glue. This case, when dry, offers a uniform support to the swollen vessels of the leg; and, in the course of a few days, the well-known distressing symptoms dependent upon this condition of the veins entirely, or in a great measure, disappear. When the varix is accompanied with ulceration, the same plan is adopted, but an arrangement is made so as to allow the ulcer to be treated without disturbing the case. A *window*, somewhat larger than the circumference of the sore or sores, is cut while the bandage is moist. If the sore is superficial, and the affection not very chronic, it is found that the lesion is soon repaired, and that there is no occasion to leave the ulcer uncovered. This plan of treatment has, in many instances, proved not only palliative, but as effective as obliteration of the vein or veins by means of the twisted suture, while it possesses the advantage of being available in almost every instance of varicose enlargement of the superficial veins of the extremities. The bandage, when well applied, can be worn for many weeks, or even months, but the rapid subsidence of the swelling of the leg, in some instances, may require a re-casing of the limb at an earlier period.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Dr. Willshire, President.

Some Chinese anatomical drawings were exhibited, and also a ball apparently of wax, about as large as a walnut, with some Chinese characters upon it. It was said to be used for procuring abortion, but in what way was not known.

FRACTURE OF THE SKULL.

Mr. **Hird** briefly related a case of fracture of the base of the skull, attended by some unusual circumstances. As it will be brought before the Society more fully at a future time, we reserve the report.

Mr. **Bryant**, in reference to a statement that had been made to the effect that fracture of the base of the skull never occurred except when the injury was at the vertex, related a case, lately admitted into Guy's Hospital, of a man who was struck on the forehead, just above the nose, whilst looking out of the window of a railway carriage. The skull was fractured, portions of the brain protruding. He was able to walk to the station and complain. He was removed to Guy's Hospital. After death, the base of the skull was found fractured to a great extent.

The **President** read a paper upon

THE CONSTITUTIONAL RELATIONS OF RICKETS.

The chief argument maintained by Dr. Willshire was, that *rachitism* is a manifestation of *struma*. This he affirmed in opposition to the teaching of Rokitansky, Merei, Stiebel, and Von Mauthner, that rickets and struma were not only not related, but were absolutely *antagonistic* to each other. If the *ledentia* of rachitism be carefully observed, it will be found that they are precisely the same as those preceding and accompanying *scrofulosis* and *tuberculosis*, the other external or open manifestations of the strumous diathesis: that these antihygienic conditions must have in all three instances (in the majority of cases) a previously depraved constitution to work upon: that this particular state is derived from the parents. In the production of rickets, as in that of scrofula and tubercle, there are, therefore, a double set of causes in operation: one series to be observed in the predisposing or diathetic state hereditarily bestowed upon the offspring; the other series composed of the degenerative influences under which the child lives and grows up. In a limited number of cases, where exposure to the latter series is long continued and its power is intense, such influences may operate both in a predisposing and exciting manner—in fact, compose the whole or only series of causation. The noxious elements which constitute what is well known as the "great town system" form the chief exciting causes of the outbreak of rickets. But they always operate *en masse*, and, in the opinion of the author, no single element could be picked out—such, e.g., as improper or insufficient nourishment—as alone engaged in the causation. He therefore could not help regarding as erroneous such views as maintained rachitism to be *solely* due either to the want of a sufficient amount of phosphates from without (i.e., in the food), or else to a resolution of them in, and rapid excretion of them from the system immediately after their reception. Dr. Willshire believed that rickets often occurred where there was not any deficiency of soluble phosphates in the diet, and where there was no proof of a superabundance of acidity in the *primæ viæ* and rapid excretion of an excess of phosphatic salts in the urine. He admitted that too early weaning, dry-nursing, and after-feeding upon materials very imperfectly assimilable by the child, constantly played an important part in the secondary causation; but when these things operated, other degenerating and anti-hygienic influences were always in force as well. It had been stated that the adulteration of bread by alum (by which an insoluble salt was formed with phosphoric acid) was "the explanation of that frightful amount of disease in pap-fed babies. The phosphoric acid so essential to them is lost altogether. The brain, the nervous system, and the bones are arrested in their development; and hence, also, the explanation of the great comparative success in bringing up children by hand in the country on home-baked bread, which contains no alum, and which, although of darker colour, provides phosphoric acid in an assimilable state to the child." Now he (Dr. Willshire) would ask, with all deference, if there were no other favourable modifications of the hygienic environments influencing a child brought up by hand—e.g., upon the Downs of Sussex, and one *dragged up* in Wapping or St. Giles', than the amount of soluble phosphates in the nourishment? Many people believe that rickety children are, *cæteris paribus*, quicker and more intellectual than others; if so, this could scarcely be regarded as supporting some of the views relative to alumenized bread being the cause of so much mischief. In most cases of rickets, the children came into the world with a particular diathetic tendency. In the absence of this, the second series of causes which had been alluded to could not produce the disorder, unless in exceptional instances where their operation was long-continued and of great intensity. Now what was the nature of the diathesis in question? Some believed it was *syphilis*; others stated it was *gout!* He believed it to be *struma*. Daily experience showed him that strumous parents would beget one child in whom the diathetic morbid nisus manifested itself in *scrofulosis* (lymphadenitis, ulceration of articular cartilage, &c. &c.); a second child in whom it prompted to *tuberculosis;* and another, in whom it became legible in *rachitism*. In thus reducing rickets to a manifestation of the strumous cachexia, no doubt he had associated together a particular form of inflammation and its events, as in scrofulosis,—the deposit of a caco-plastic material, as in tuberculosis,—and an arrest of development (of osteogenesis, in particular), as in rachitism; and such affinity many would deny as apparent. But let a cognate malady, syphilis, be taken, and, if we were less acquainted than we are with its natural history—of its transit from primary sore to eruptions, to affections of the cutaneous surface and of mucous membranes, to iritis, to glandular enlargements, and through these to wandering noctural pains of the bones, to periostitis, to caries, necrosis, &c., to its transmission to the fœtus and final culmination in producing abortion—should we, he asked, find it much easier to believe these different manifestations to be the offspring of a common origin, than those of the strumous cachexia just mentioned?

Dr. **Webster** said, that he believed rickets was more frequent in females than males. It would appear that merely impure air did not influence the disease; as in Manchester it was rife; in Glasgow, almost unknown. The atmosphere of Dresden was good, but the disease prevailed there.

Dr. **Camps** attributed rickets, in a great degree, to bad nursing.

Mr. W. **Adams** doubted if the disease were of a constitutional character. He had seen it in many children whose parents were perfectly healthy; and had always found it in—1st, those children who were half-suckled and half-fed; 2ndly, in those who were suckled too long. The cure was usually spontaneous.

Mr. **Barwell** could not but think that the disease was inherited in many instances.

Dr. **Chowne** advocated the views advanced by the late Mr. Shaw respecting the disease.

Mr. **Henry Thompson** objected to the classification of rickets amongst "scrofulous" diseases. Scrofula was a term implying reproach, and there was no evidence that rickets was really associated with that state of the system.

DIPHTHERIA.

Dr. **Semple** called the attention of the Society to a disease which was exciting very great interest at the present moment—namely, diphtheria. He had been called down to Bagshot to see some cases of the affection in question, but he arrived about an hour after one of the patients had died: he found that the last fatal case was the third in the same family, the ages of the patients being respectively eight, twelve, and fifteen years. They died at intervals of about a week from each other; and while the funeral service was being performed on one of the children, the death of the elder sister, aged fifteen years, occurred. Dr. Semple, however, repaired to the house of the patient, in company with Dr. Blount, of Bagshot, and obtained permission to make a post-mortem examination of the body, although to a limited extent. It was to be regretted that very few examinations after death had been obtained in this disease, owing to the prejudices existing in the minds of relatives, especially in the rural districts. However, nearly the whole of the diseased parts were examined, consisting of the tonsils, a part of the tongue and of the pharynx, the epiglottis, the larynx, and the trachea. On the whole of these parts the pellicular membrane, which is the characteristic feature of true diphtheria, was developed. It was especially necessary to bear this character in mind, because he (Dr. Semple) had reason to believe that, at the present time, many affections of the throat were confounded together, under the name of diphtheria, which had very little relation to that disease—at least in the sense in which the term was used by Bretonneau, Trousseau, Guersent, and other French writers. It was especially necessary to exclude the scarlatinal sore-throats from the category of diphtheria, because scarlatina has no real or necessary connexion with the diphtheric epidemic. Other cases which were confounded with diphtheria were, ulcerated sore-throats of various kinds, cancrum oris, and even common tonsillitis. The true distinction existing between diphtheria and the malignant ulceration of the tonsils in scarlatina, was to be found in the circumstance that the pellicular exudation in diphtheria may be readily removed by the handle of the scalpel, leaving the mucous membrane below it, congested indeed, but smooth and entire; whereas, in the malignant ulceration of scarlatina, the substance of the tonsils is actually eaten away and destroyed. The fatality of diphtheria was quite appalling. Dr. Blount had attended eight cases of the disease in the vicinity of Bagshot, and every one of them had been fatal. Both the commencement and the termination of the disease were marked by peculiarly treacherous and insidious characters: the symptoms, at first, are so slight, that they are hardly noticed by the patients or their relatives; and when medical advice is at last sought for, the pellicular exudation has generally reached the air-passages, when the hopes of recovery are almost extinguished. The termination of the disease is equally insidious, and is often quite unexpected; for although many patients die with symptoms of well-marked asphyxia, yet others perish suddenly by syncope while they appear to be going on favourably. Dr. Semple was remarkably struck with the circumstance that the locality, where these fatal cases occurred, was not one where one might expect, *à priori*, a malignant and fatal form of disease to prevail; for the surrounding country was open and beautiful, the soil dry, and the patients by no means placed in unfavourable hygienic conditions; nor did it seem that the disease attacked ill-fed or puny children, for the girl, whose body was examined, was a plump, well-formed person, moderately fat, and with good muscular development. The therapeutical management of this disease was a question of the greatest importance; but, hitherto, all kinds of treatment had been attended with very unsatisfactory results; the best treatment was, unquestionably, the application of strong caustics to the throat, at the very earliest possible period; and the hydrochloric acid, used in a concentrated form, was, perhaps, the best. This appears to stop the progress of the false membrane into the air-passages, and acts somewhat in the same manner as concentrated nitric acid in preventing the progress of phagedænic ulceration. When the false membrane has reached the trachea and bronchi, there is very little hope for the patient. The next question is whether, when this extension has taken place, the operation of tracheotomy—so much extolled and so extensively practised by the French physicians—ought to be resorted to. In the case of the girl at Bagshot, Dr. Semple was prepared to recommend the performance of the operation, if he had found the patient alive, and if she were suffering from the symptoms of asphyxia; but the post-mortem examination proved that this proceeding must have been useless, for the false membrane was so extensively spread over all the air-passages that it could not have been removed, and it had so little tenacity that it would have broken under the forceps used for extracting it. True diphtheria, therefore, was characterized by the presence of the false membrane at the back of the mouth, extending, in the fatal cases, into the air-passages, and causing death by obstructing the respiration; and it differed, on the one hand, from those sthenic forms of throat-disease which were accompanied by full pulse, and the other ordinary signs of acute inflammation; and, on the other hand, it differed from those low forms of throat-disease which arose from a depressed habit of body, from unclean and unhealthy habitations, and from the complication of scarlatina. The extensive prevalence of diphtheria, at the present day, demanded the attention of the Government; it was sweeping off great numbers of the rural population, both young children and persons verging on puberty; and from the peculiarly insidious nature of the early symptoms, it was generally neglected until remedial means were of no avail.

Dr. Stavely King doubted the propriety of tracheotomy in this disease. He thought the patient would die of exhaustion under the knife. Many cases of so-called diphtheria were merely cases of common throat affection; such as, on the one hand, was low form of angina in scarlet fever, and, on the other, sthenic croupal inflammation. He related some cases of diphtheria which had come under his observation, in which the early symptoms were very obscure. In his opinion, the disease was to the respiratory membrane what thrush was to the intestinal. He believed it had a confervoid origin, and that the effect of the poison, when absorbed, was, in its elimination, to set up a sthenic inflammation simulating croup. Hence his treatment, in the cases referred to, consisted in the employment of powerful counter-irritation, the application of a leech to each side of the trachea, chlorine washes, and the administration of port-wine, quinine, and chlorate of potash.

Mr. Streeter thought the disease was essentially allied to croup, and advocated the employment of emetics.

Mr. T. Bryant read a paper

ON CHRONIC INFLAMMATION OF THE ARTICULAR EXTREMITY OF THE BONES.

The author commenced by stating that under the name of chronic inflammation of the articular extremity of the bones, he would venture to call the attention of the Society to a large class of interesting diseases, which, in their origin, are seated exclusively in the bones, but which, from their proximity to the joint, are almost always followed by disease of the articulation, unless arrested in an early stage. It had been described by authors under different names, and is now generally known by the term strumous or scrofulous disease of a joint; but he could not for one moment doubt that the majority of the cases which are described by surgeons under that name depend upon a chronic inflammation in the bone. The disease is, in its origin and progress, inflammatory, and by early treatment may be arrested. The pathological conditions found upon examination are those which an inflammatory process will produce, and it is quite exceptional to find in any bone that yellow, cheesy material which pathologists so well knew as strumous deposit; he did not deny that such a deposit may be occasionally present, but the cases in which it is found are so rare, that we may fairly regard such a specimen as a pathological curiosity. If, then, we confine the term strumous disease of a bone, as he (Mr. Bryant) believed we should, to such instances only where such a deposit is present, we shall, as surgeons, seldom have occasion to employ it. He then went on to describe the pathological changes which are visible in such cases; how, in the earliest condition, simple vascularity of the bone is the principal morbid condition associated with the presence of pinkish serum in its cancellated portion, which is much enlarged and easily broken down on pressure, from the loss of its earthy constituents. In its more advanced stage, the bone will be found much enlarged, the columns radiating from the shaft in a palm-like fashion, as if they had been spread out from downward pressure. He stated that if the inflammatory processes were of a tolerably healthy character, parts of the bone would appear denser and more indurated than the remainder; but that more frequently suppuration and death of the bone was the result, and that a small or large sequestrum would be seen. The denser portion of the bone would also appear thinner than natural, and the articulating surfaces more vascular. In more advanced cases, portions would be found loose, and lying in the joint, having been like a slough thrown off, the denser portions of bone dying more rapidly than the cancellated. The author then went on to show how the cartilages would be first affected when the disease had extended to the articular surfaces of the bone, and that in advanced disease they would be either thrown off, and found lying loosely upon the bone, or, in more chronic cases, to have entirely disappeared. He stated that the disease, having involved the articular cartilages, would soon spread to the synovial membrane, and that effusion into the joint would then appear; the symptoms being very acute when any portion of the bone had died and been discharged into the joint; in that case, rapid disorganization of the joint would be the result. Mr. Bryant then remarked upon the chronic character of this disease, and that it might take months, or even years, before the final destruction of the joint took place; but that, unless arrested, such a termination must, sooner or later, be observed. He then proceeded to the consideration of the symptoms by which such changes can be diagnosed, and dwelt upon the importance of observing the earliest conditions of this serious malady, for it is only in an early stage that much hope can be entertained of arresting its progress. The earliest symptom, which will generally call attention to the part, is some slight pain or aching, increased by pressure over some portion of the bone, and it is most frequent in delicate and strumous children. In more advanced cases, an evident enlargement, or dilatation, of the bone will be observed, accompanied with stiffness upon movement, and increased pain.. He then described how, as the disease advances, the cellular tissue external to the joint becomes involved, as known by thickening, and that when the disease had spread to the cartilages and synovial membrane, the pain became much greater, associated with inability to move the joint without great torture, and attended with all the local and constitutional effects of an acute synovitis. Suppuration sooner or later appears, and abscesses open in all parts of the joint, the character of the disease being well declared in the total destruction of the articulation. The author then briefly alluded to the symptoms as displayed in different joints, and remarked that in delicate strumous children, the earliest complaint of pain or aching of a joint should not be disregarded, and that if it is at all lasting, the earliest stage of this chronic inflammatory condition of the bone should be suspected. He stated that parents are too apt to treat the complaints of children, particularly of joints, as "growing pains," and that on this account frequently the earliest symptoms of this severe disease are overlooked, to the sacrifice of the child's joint, or even life.

In considering the treatment, the author stated that there were two principal facts which we should always remember—first, that the disease was inflammatory in its origin and in its progress; and secondly, that it was almost always found in subjects of a weakly constitution and of small power. The first point, then, was to correct, if possible, the disposition to disease; to supply power to the patient to resist the morbid inflammatory process and to overcome its effects. Tonics then became valuable remedies, in any form that might suit the patient; he preferred iron, in the form of the syrup of the iodide, or the phosphate combined with the phosphate of lime. Cod-liver oil was also a good tonic, and might be given at the same time. Good diet and bracing air were also recommended, and, in fact, all general considerations should be employed to improve the health and weakly powers. With respect to local treatment, Mr. Bryant stated that rest was an absolute necessity; that no movement or pressure upon the joint by standing should be allowed upon any consideration; and that, in the earliest cases, this local treatment, combined with the constitutional, was frequently sufficient; that when pain was great, leeching was of vast benefit, and hot or cold applications, according to the relief they conferred. When the cellular tissue became involved, the author believed that mercurial strapping was a valuable remedy, and that splints were also required to preserve perfect rest. In recent cases, where symptoms clearly indicate disease of the joint, he strongly advised the use of mild mercurials, in the form of the bichloride, or grey powder, combined with tonics; and stated that under its use, with rest and other constitutional remedies, a speedy cure may often be obtained. When by suppuration of the part the cartilages had clearly become destroyed, and all hope of restoration had passed away, it should be the object of the surgeon to obtain an anchylosis of the joint; and this might very frequently be accomplished by preserving perfect rest and immobility of the part by splints and strapping, and attending at the same time to the constitutional treatment of the patient; but this end could only be obtained by great care and much patience, on the part both of the surgeon and his patient. The author then went on to consider the subject of operative interference in these cases, and expressed an opinion that when necrosed bone was present, and perfect disorganization of the joint had taken place, if the part diseased should be the shoulder and elbow, there was no doubt that excision of the joint was the right operation to be performed, as perfect success might then generally be expected, and even partial use was better than the loss of a limb; but that when the hip and knee joints were the diseased parts, it was impossible to speak of the operation of excision in the same positive and unqualified terms. He believed that when it was possible to diagnose the existence of necrosed bone, the joint being as a result already disorganized, and if the surgeon was tolerably certain about being able to remove it, the operation of excision of the diseased portion was certainly the correct treatment, if other general considerations were not opposed to such a practice; but in the hip-joint such a diagnosis was seldom possible, and the removal of a portion only was quite useless, for the part would heal up partly, only again to open, and be followed by all the symptoms which had previously existed. He believed that the only cases in which removal of the head of the femur was advisable, were those in which the bone was dislocated upon the dorsum, and necrotic, and which by its presence was keeping up profuse suppuration and constitutional irritation; but he thought that such cases could hardly be regarded as cases of excision of a joint, but should be classified more naturally with the operations for caries or necrosis. When discussing the question of operation as applied to the knee-joint, he believed that when the case was a good one for excision,—that is, when the disease was chiefly confined to the articular facets of the joint, and the powers of the patient were good,—it might be confidently asserted that there was generally a fair chance of obtaining an anchylosed limb, and that the operation of excision should then never be performed. In other cases, where the disease was more extensive, involving a large portion of the articular extremities of the bones, and where the powers of the patient were bad, the chances of success by excision became small, and amputation had then better be resorted to. There might be some intermediate cases, where the disease was in the head of bones; and where that disease might be removed; where the chances of recovery if left to Nature were slight—for she might be unable to throw off, or get rid of, the necrosed or carious bone,—and where the powers of the patient were tolerably good: in such, if the surgeon could remove the bone which was keeping up, by its presence, the disease in the joint, and was thus preventing its recovery, the operation of excision might be pronounced of value. The author had no doubt that limbs were now saved more frequently than of old by means of excision, but there was also no doubt that many of these were useless, if not absolutely injurious and in the way; and although he would not wish the Society to believe that he was at all an opponent to what is called conservative surgery, still mere conservation must be injurious, if it were not associated with practical tendencies; and unless a limb could be restored sufficiently to enable its owner to pursue his duties or his occupation, its absence would be less injurious, and amputation had better be performed at once. The author stated that he might have quoted numerous cases, to illustrate the different points brought forward, from his notes of two thousand cases of injuries and diseases of the joints which he had in his possession; but he felt sure that the experience of those surgeons who were present would supply the deficiency. He concluded by stating that he had given, as briefly as possible, the results of inquiries which he had been pursuing for many years; and that if he had been able to place a large and serious class of cases in their proper position in our surgical pathology, his end had been obtained, and he trusted that the time of the Society had not been taken up in vain.

Mr. W. **Adams** thought that the disease usually commenced in the structures of the joint itself, but that it might occasionally begin in the cancellated structure of the bone. In the early stages of the complaint he had discontinued the employment of mercury, as he had invariably found it prejudicial to the general health.

Mr. **Barwell** spoke of the importance of placing the limb in a splint at the very commencement of the treatment of this affection.

Some discussion followed between Mr. **Price** and Mr. **Birkett**, respecting the value of excision in certain cases of joint disease; the former advocating its judicious employment, whilst the latter contended that amputation was a far preferable proceeding, when necessary, and that the statistics of recovery were really in favour of amputation, when all the circumstances relating to the two operations were taken into consideration.

Dr. **Ogier Ward** mentioned some cases of scarlet fever, followed by anasarca, in which the urine was alkaline and albuminous; and other cases in which, though the urine was alkaline, it was not albuminous.

Dr. **Stocker** stated that cases had occurred in his practice in which all the symptoms of albuminuria were present, without any signs of albumen being traceable in the urine.

Dr. **Routh** had never seen dropsy after scarlet fever without being able to trace albumen in the urine. In these cases, when the urine was properly tested, he believed albumen would invariably be found to be present.

Mr. **de Méric** called attention to the peculiar manner in which limbs lying across rails may become more or less injured by locomotive engines in rapid motion; and instanced the case of a young man verging upon insanity, who was lately admitted under his care at the German Hospital. This patient had determined to commit suicide; and, after wandering all night on the 15th inst., went to the North London Railway between Dalston and Hackney at about four in the morning, where he placed both his legs on one of the down rails. From his statement it would appear that he sat down, and allowed his lower limbs to lie across the rail, with the intention of putting an end to his existence; not thinking that he was possibly preparing for a dreadful mutilation which might not prove fatal. A coal train soon came flying along in the obscurity prevailing at this season so early in the morning; and it would seem that the right leg was caught and severely injured either by the wheel or the kind of ploughshare placed in front of the engines. The left, however, was probably hurled off the rail, for it did not suffer the slightest lesion. The fibula on the right side seems to have been broken by the force of the shock, without a cutaneous solution of continuity; and it is likely that the tibia of the same side was crushed (a little higher up) against the rail, being thereby broken transversely, with severe lesion of the soft parts. The left leg must have been pushed and twisted away from danger by the right limb. The compound fracture is very severe, but Mr. de Méric said that he was trying to save the leg. He mentioned the case principally to put upon record the manner in which a limb may escape in the very perilous position in which it was placed.

Mr. **Henry Smith** read a paper

ON THE TREATMENT OF INTERNAL HÆMORRHOIDS BY THE APPLICATION OF STRONG NITRIC ACID.

The author commenced his paper by a reference to the pathology of hæmorrhoidal diseases, alluding to the distinction between the conditions which obtained in external and internal hæmorrhoids. In the latter class there were two forms which were mainly presented to notice: the first was where there were distinct tumours of a more or less vascular character, composed either of enlarged veins or of an aggregation of small arterial branches, and covered by the mucous membrane of more or less altered character; the second kind was that where there was not so much, if any, decided hæmorrhoidal tumour, as an unhealthy and preternaturally vascular state of the gut. In the first class, however, there were two distinct forms: the one was where the tumours were large, blue in colour, and evidently composed mainly of enlarged veins; these were troublesome and painful, chiefly from their bulk: the other was where the tumours were of a bright-red colour, mainly composed of small arteries, exquisitely sensitive, and easily disposed to bleed, at times in very large quantities. As regards the treatment of these varied cases, Mr. Smith, in the first place, alluded to the importance of strictly attending to constitutional as well as local measures. By these means many of the cases of internal hæmorrhoids which are brought before the surgeon may be, if not entirely, at least very much remedied; but in other cases, which are by no means unfrequent, so much suffering is produced, and such a length of time has elapsed since the existence of the disease, that surgical interference is necessary. Excision of internal piles has been almost entirely given up by prudent surgeons, as dangerous hæmorrhage has often followed the operation. The ligature was now the chief remedy in cases requiring operation; but admirable as was this means of curing the disease, the trouble and danger attending upon it was sufficient to cause surgeons to hesitate in using it, if some other means equally useful could be found. The author alluded to some instances of death which had occurred, and although recommending it as the only available remedy in cases where the hæmorrhoidal tumours were large and numerous, deprecated the employment of the ligature in the less severe cases. It was to these, and especially to those cases where the tumours were of moderate size, of a bright-red colour, and prone to bleed, that the topical application of the strong nitric acid was so useful, not only as a palliative, but as a curative measure.

Its application did not necessitate confinement to bed, and was not productive of danger, nor even of pain to any amount, if it was properly used. The author minutely described the mode of its application, and the means by which any unpleasant consequences would be averted. He (Mr. Smith) had only met with two cases in which anything like severe effects were produced: in one, great pain and distress were caused by a too free application; in the other, a great deal of hæmorrhage followed. But these might be easily avoided by a careful method of applying the acid. In conclusion, the author mentioned several illustrative cases.

Dr. **Stocker** advocated the use of the écraseur in certain cases of hæmorrhoids.

Mr. **Henry Lee** thought that when nitric acid was applied in proper cases it was a most admirable remedy. The use of this agent had fallen into disrepute in consequence of the improper manner in which it had occasionally been employed. He had seen only one case in which any bad results had followed the operation. In this instance, troublesome hæmorrhage occurred, which was, however, arrested, and the patient was cured. He recommended the application of the acid to internal hæmorrhoids by means of the speculum. When properly applied there was no fear of the acid spreading beyond the tumour.

Dr. **Hancock** advocated the constitutional treatment of piles. This, in a great majority of instances, would be found quite effectual. When an operation was required, the ligature was preferable to the acid, and, if used judiciously, was not open to the objections raised against it by Mr. Smith.

Mr. **Weeden Cooke** doubted if operations for the cure of piles were generally successful in entirely removing the disease. Constitutional treatment, in these cases, was most essential.

Mr. **de Méric** doubted if the application of the caustic was altogether so free from danger as Mr. Smith had stated, and related instances in which bad results had followed its application. He deprecated the practice of allowing patients to go to their usual employments after operation for hæmorrhoids.

Dr. Willshire, Dr. Chowne, and Mr. Harding spoke of the importance of attending to the constitutional treatment of piles, which, in the majority of instances, would be found successful in removing the disease.

Medical Annotations.

"Ne quid nimis."

CLEANLINESS AND GODLINESS.

It is not often that public men have ventured to set forth the intimate connexion which exists between moral depravity and physical degradation. Where this connexion has been displayed, the order of causation has most often been reversed, and it has been thought shame to admit that a physical cause could produce a startling moral effect. Every one has been ready to admit for many years that mental darkness and its concomitants of crime and immorality were to be looked for amongst those who are lowest in the scale of social economy, and least favoured in the appliances of social decency and sanitary comfort. But there are many who would even now be slow to admit that the vice and immorality of the human dregs of our cities and our towns can be distinctly traced to an origin in the physical degradation in which they are plunged—the filth, the disease, the bodily evils which surround them with depressing and brutifying influences. We rejoice, therefore, that a man of no less eminent piety and philanthropy than Lord Shaftesbury should lend the aid of his eloquent utterance and grave authority to the public enunciation of these facts. In an oration, which rises in stateliness and force above the usual level of modern oratory, this distinguished man has declared that moral and physical evil cannot be dealt with in detail when you come to deal with the question, but must be regarded as in combination.

> "Go and look into the records of over-crowded dwellings. Look into the effects of drains, of ill-drained close alleys, of the pestilential localities which are found to be the greatest swarms of all that fills our hospitals with fever, and our workhouses with paupers; and then bear in mind the great fact that I hope will now be examined into, and I believe the more you examine it the greater illustration you will have in it that crime is now ascertained to be no longer dependent upon poverty or high wages, but that it is invariably found to be most fertile, most abundant, and most constant amongst ill-drained localities and amongst closely-crowded houses, and in all places where neglect and over-crowding squalor keep festering together (Cheers). Well, now, I may say, look also to your common lodging-houses. In many places they still retain all their normal evils. Look upon them as hot-beds of vice, as hot-beds of pestilence, and take care that in your survey of the different towns these buildings do not escape your observation...... Then, again, look at the total want of water supply—the total want, in many instances, of a wholesome water supply—in the midst of our dense localities. Look, in consequence, and find no fault with the wretched people who are the victims of that neglect; if you go amongst them, and find them covered with dirt, so that you cannot distinguish their nakedness from the miserable rags that cover them—if you go and see these things, do not lay the blame upon them, but lay the blame upon yourselves. You have knowledge, you have the means. They have not the knowledge, they have not the means; and by everything true, by everything holy, you, you are your brother's keeper."

These are words which every man should take to heart. They are winged with force straight to the mark. Let no man take comfort and say, "This is not my work; it is enough if I am compassionate and pitiful. I need not meddle in the work; things are mending, and they will mend." It is every man's duty to lend his earnest and active aid.

A NEW DISEASE.

Pandora's box is not yet exhausted. When the myriad ills that "flesh is heir to" flew into the upper air, they did not all forthwith settle on mankind; many of them sought secret corners and hiding-places, and now and then one emerges from its dim retreat, and fastens upon its prey. It is cholera, or it is diphtheria, or some other plague. Recently we have had news of a fresh disease, the *mal d'engasgo*. It is described in a valuable work on Brazil, lately published in America by D. P. Kidder, D.D., and Rev. J. C. Fletcher, in Philadelphia. It is stated to be widely prevalent in some portions of the interior of Brazil, but to be unnoticed in any medical work whatever. The first indication of its existence is a difficulty in swallowing, especially fluids; solids pass easily sometimes; the thicker the fluid the less the difficulty in swallowing; water is especially rejected. The patient thus affected appears to be in good health; but in five or six years' time death ensues by actual starvation. Of course, the sufferings endured are of the most acute poignancy. Opinions of the local physicians are divided as to its pathology. Some think it due to paralysis, and others to thickening of the mucous membrane. There are particular obstacles to a post-mortem investigation. A physician practising at Limeira, called to a distance to see a patient afflicted with this malady, found no less than nine persons suffering from it. As yet no remedy, it is said, has been found. The sea-air is beneficial; the disease is not found upon the sea-board. It appears that a New York physician has suggested that the symptoms may be due to erysipelas, since somewhat similar manifestations occurred in a case in his practice, having had such an etiological relation.

CHLOROFORM AND ITS ADMINISTRATORS.

The frequent recurrence of death from the administration of chloroform during the last few weeks has induced a feeling of uneasiness and distrust of this agent both in the profession and out of it. It is very certain, however, that a great part of this feeling might very advantageously be transferred to the mode of administration which is still in vogue. It must not be forgotten that, in all these cases, the chloroform was administered loosely on a handkerchief, and in more than one instance, as has been proved, it was of a thickly-woven texture, which did not allow of a free passage of air. This mode of administration is, we think, most unjustifiable. The experiments of the late Dr. Snow conclusively showed the necessity of carefully regulating the proportion of vapour in the air inspired. We strongly recommend to thoughtful perusal the valuable monograph on the subject of Anæsthesia which he has bequeathed to the profession. No one can rise from reading this valuable digest of a wide experience and the observation of ten years of scientific and practical labour, without a feeling of regret that so much carelessness should still prevail in the administration of this most potent vapour, and a sense of the necessity for a more extended instruction in the principles of anæsthetization. We commend the following sentences to the very careful consideration of surgeons:—

> "The great point to be observed in causing insensibility by any narcotic vapour, is to present to the patient such a mixture of vapour and air as will produce its effects gradually, and enable the medical man to stop at the right moment. Insensibility is not caused so much by giving a dose as by performing a process. Nature supplies but one mixture of diluted oxygen, from which each creature draws as much as it requires; and so, in causing narcotism by inhalation, if a proper mixture of air and vapour is supplied, each patient will gradually inhale the requisite quantity of the latter to cause insensibility, according to his size and strength. It is, indeed, desirable to vary the proportions of vapour and air, but rather according to the purpose one has in view, whether medicinal, obstetric, or surgical, than on account of the age or strength of the patient; for the respiratory process bears such a relation to the latter circumstances, as to cause each person to draw his own proper dose from a similar atmosphere in a suitable time."

The proportion of chloroform most suitable to produce insensibility, Dr. Snow found to be about four cubic inches of vapour, or rather more than five grains of chloroform to one hundred cubic inches of air. With a properly-arranged inhaler, it is easily possible to supply the vapour in this fixed proportion. This simple precaution would rob chloroform of nearly all its terrors and its danger. It is a very surprising consideration that while the niceties of surgical manipulation are invariably attended to with the utmost care, the production of anæsthesia is very frequently left in the hands of very inexperienced persons. It is sad to see the issues of life and death treated with indifference; it would be yet more so, if we were not well aware that the fault is one of thoughtlessness, and that those who have fallen into it will probably shrink from a similar error now that it has been pointed out so forcibly by recent events.

DEATH IN THE SNUFF BOX.

We track the Destroyer now in his most secret haunts, and are fain to think that in time we shall fathom his most subtle devices. We have hunted him out from amongst the snuff long since; and there he is now hiding in the box itself. In boxes lined with thin lead, and yet more so in those lined with thicker lead, much used by Paris traders, a chemical action is excited which has the effect of charging the snuff with sub-acetate of lead. Chevallier saw reason to suspect this; Boudet of Paris, and Mayer of Berlin, have confirmed his belief by careful and continued experimentation. Mayer traces distinct symptoms of lead-poisoning, and even fatal results, to the habit of taking snuff from packets of which the inner envelope was sheet-lead, and in which, therefore, this chemical action was vigorous and continued.

CHARCOAL IN THE SEWERS.

A VERY simple and practical solution is offered by Dr. Letheby to the difficult and much-vexed question of destroying the noxious effects of the sewer gases. This problem, as our readers may remember, has puzzled the wisest and most ingenious of our sanitary engineers; and various plans have been proposed for adoption, many of which involved an outlay of many hundred thousand pounds, while not one appears to satisfy the necessities of the case. Here is Dr. Letheby's suggestion, and we are glad to know that the City Commission of Sewers are about to adopt it. It is of great practical importance, and will, we hope, be productive of immense good.

> "We have in common wood charcoal a powerful means of destroying the foul gases of sewers. How it is to be applied is a question of but little embarrassment. Ventilate the sewers as you will, either by the open gratings in the streets, or by the rain-water pipes of the houses, or by the pillars of the gas-lamps, or by tubes carried up at the landlord's expense from the drains of every house, or by special shafts in the public streets—in fact, let the gases go out of the sewers how they will and where they will, you have but to place a small box containing a few penniesworth of charcoal in the course of the draught, and the purification of the air will be complete. As far as we know, the strength and the endurance of this power are almost unlimited; so that when once the air-filter has been set up it will last continuously for years. Its action also upon the draught is not particularly injurious. The temperature of the sewers, and the agencies which are now at work in circulating the air and ventilating them, will be sufficient to keep up a current of foul air through the filters; and if these were multiplied to a large extent, the friction of the gases upon the charcoal would be reduced to an insignificant amount."

THE FIDELITY OF NATIVE SURGEONS IN INDIA DURING THE LATE REVOLT.

DR. G. G. CHUCKERBUTTY, of Calcutta, who was well known in England as having a few years ago, in conjunction with some others of his countrymen, completed his medical education, and taken his diplomas in London with a considerable amount of credit and distinction, has forwarded to us a copy of his discourse on "Native Education in India," read at the Bethune Society, Calcutta, July 8th, 1858. In it he makes the satisfactory statement, that out of the large body of native doctors and sub-assistant-surgeons who have issued from the Calcutta Medical College, "only two or three have been proved to have actually joined the ranks of rebellion, although the vast majority of them were exposed to the same temptations as the Sepoys of their regiments."

Miscellaneous Correspondence, &c.,

"Audi alteram partem."

REMARKS ON DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—This is a disease of recent growth in England, and has never been fully treated upon in books. The French have been accustomed to it many years, and call it diphthérite from the Greek διφθεριτης, or διφθεριας—one clothed in skins, from διφθερα skin or leather. They have given it this name from its tendency to form false membranes over the part affected. But as croup, cynanche maligna, and scarlatina anginosa, have all the same disposition—viz., to effuse coagulable lymph, to slough, and to form and throw off deciduous deposit, I think the term is vague and not specific enough. It does not hit the nature of the disease.

From observing numerous cases, and tracing the mildest attacks to the most malignant, I have arrived at the conclusion that it is distinctly *herpetic*: and, therefore, would call it herpes malignum.

I have no doubt the disease has occurred in England, in isolated cases, from time to time; but its specific nature has never been discovered. I remember assisting at a post-mortem examination of a girl who died in University College Hospital, under the care of Dr. A. T. Thomson. I never saw another case like that till now; and I feel certain that was diphthérite.

The pathology of diphtheria, then, rests with the French: and I have not seen that they fully agree.

Diphtheria comes on, in many instances, very suddenly, like cholera, and influenza, and erysipelas, without any warning symptoms; in others, there is soreness of the throat, like tonsillitis, or of the nares, like catarrh, or there is pain in deglutition, like pharyngitis, or cynanche maligna; shiverings are very irregular.

It varies in extent from simple herpes of the lips or nose, which are covered with vesicles which burst, ulcerate, and heal in two or three days, to the most extensive inflammation, and sloughing, and ulceration of the cheek, the palate, and the pharynx; and more in children than adults. It extends into the larynx and trachea, and kills by asphyxia.

In the mildest form there is a tendency to ulceration beneath a white, loosely-attached membrane, which consists of epithelium coagulated with viscid mucus and lymph. In worse cases its vesicular nature can be distinctly traced for a few hours after its commencement, from the large patch within the cheek or upon the gum, which will slough like cancrum oris, to the more diffused bullæ upon the soft patch and pharynx. I believe that in some instances it extends to the gullet and stomach.

The specific cause is atmospheric,—as in typhus, in cholera, in influenza, and potato-rot. Debility, cesspools, malaria, and all nuisances predispose to it; and irregularities of regimen, cold drink when heated, sudden changes of temperature, and over-exertion, are exciting causes. And as all these produce debility, so is the disease itself adynamic. Patients who have recovered from a mild attack complain of weakness many days after.

The principles of treatment are antiseptic and tonic, stimulating and nutritious. The capillary system should not be engorged with fluids; neither should anything evaporating be applied to the skin; the latter is an exciting cause, and the former prevent the distended capillaries recovering their tone. Blisters inflame and ulcerate; leeches debilitate and their bites slough; and strong purgatives cannot be borne.

Diphtheria was epidemic in this district last year in November and December, has been so again since last July, and is still prevalent. Deaths have been numerous in the adjoining districts, as many as five having died in one house. Numerous cases fell to my care last autumn, and three children died of croupal symptoms. Since then all have recovered, and I attribute their recovery to the plan of treatment which I beg to subscribe.

Treatment.—1. A temperate, dry, well-ventilated room as can be obtained, no one being allowed to sleep in it except an attendant. Crowded bedrooms and animal effluvia are an exciting cause.

2. A calomel purgative, varying in strength according to the age and size of the patient; and in children, where symptoms of laryngitis appear, a rapid exhibition of the chloride of mercury, such as a grain to two grains every hour till the breathing is easier, and then every three or four hours, till the false membranes are loosened, and the bowels evacuate green stools, or vomiting. Care is needed not to carry the mineral too far, but it can be borne in proportion to the strength of the patient and the sthenic form of the attack. Children who have been healthy, and are teething, have most inflammatory symptoms.

3. The decoction of cinchona with hydrochloric acid, varying the dose of the latter from one minim to ten every four hours, in from a teaspoonful to two tablespoonfuls of the former.

4. Gargle with chloride of sodium and vinegar, a tablespoonful of each in a teacupful of hot water; also inject this up the nostrils when they are becoming obstructed. This excels all other gargles; it relieves the breathing and the fœtor, and causes the ulcers to heal.

5. Apply the stick of nitrate of silver to every part where false membrane or exudation can be seen. By means of Dr. R. Quain's tongue depressor, one can see far and wide; but when the patient will not submit to this, and when the disease spreads beyond the reach of the caustic case, a probang and a clean sponge well saturated with a strong solution of nitrate of silver will answer.

6. Rub the external fauces with compound iodine ointment night and morning; and when erysipelas may appear, apply the stick, and lay on a plaster of strong mercury ointment.

7. Keep the room and all else sweet and clean.

8. A nutritious diet is necessary. A little mutton every day; boiled milk, rich gruels, and beef-tea, with hot portwine-and-water, (half wine, with sugar and lemon,) for all above ten years; and warm milk-and-water for minors. All things should be taken warm. Cold drinks are an exciting cause.

The disease is not infectious, except, perhaps, under extraordinary circumstances.

I could illustrate these remarks with a few cases of different intensity; but I fear to encroach upon your space.

I am, Sir, yours, most truly,
Richard Cammack, Jun.

Bennington, Boston, Sept. 1858.

P.S.—Since I wrote the above remarks, I have seen many cases. I am convinced the malady is herpetic, and, therefore, would have it called so. It is malignant frequently, therefore herpes malignus anginosus would fully specify the disease. I have no wish to encroach on your space, but beg to observe, that the medical gentlemen of this neighbourhood are much at variance as to the nature of the disease, and that it has been very fatal. I have The Lancet from the commencement, and have read the lectures of most since Sir A. Cooper's and Mr. Abernethy's; but I have never seen a full description of this epidemic.

R. C.

To the Editor of The Lancet.

Sir,—I was much pleased to see that intelligent physician, Dr. Semple, had directed the attention of the Medical Society to that fatal disease, diphtheria, and can fully corroborate his opinions respecting the distinguishing characters and treatment, having had many cases under my care; and since I have pursued the plan of applying the solid nitrate of silver, with the use of strong chlorine gargles, and the timely administration of emetics and purgatives, I have been most successful in arresting the disease.

I am, Sir, your obedient servant,
Horace Rainbird, M.R.C.S.

Bardney, October, 1858.

ON THE TREATMENT OF CONFLUENT SMALL-POX.

To the Editor of The Lancet.

Sir,—Although the treatment of disease rests upon certain general principles, which cannot be infringed with impunity, there are a variety of shades in pathological conditions in which some modes of treatment act more successfully than others, notwithstanding both are essentially the same in their origin and object. No doubt these shades are very individual in their nature, and often modify the general treatment; hence they are of great interest to the intelligent practitioner.

I had recently an opportunity of witnessing the treatment of a malignant case of confluent small-pox, by a practitioner of this town, Mr. Clay, of Moseley-street, which was eminently successful. The patient was a lad of thirteen, who had been vaccinated when an infant. The disease was ushered in with the ordinary symptoms, but in unusual severity; the fever was very high, the tongue of a dirty-brown colour, and the delirium so intense that it was with the greatest difficulty he could be kept in bed; he also complained much of sore throat and general indisposition. The administration of large doses of the sesquicarbonate of ammonia had the effect of lowering the febrile symptoms; and the delirium was successfully combated by small doses of tincture of opium and chloroform in combination. The pustules did not present the typical conditions either as regards time or form of development, and when they had reached their climax the face was one literal cluster without any unoccupied spaces, while the body and extremities were traversed by innumerable canals, as it were, formed by the pustules running into each other. Their contents were very watery, and did not possess the properties of pus. The mouth and nostrils were affected in an equal degree, and occasioned the patient great distress. To prevent pitting, the face was smeared with a paste composed of carbo ligni and a little mercurial ointment. Quinine was given in liberal doses to support the patient's exhausted powers, and six drops of a solution of phosphorus in sulphuric ether (twelve grains of phosphorus in one ounce and a half of ether) were administered every four hours. This last medicine, a new element in the treatment of small-pox, as far as we know, appeared to act with peculiar effect in sustaining the patient's drooping powers. In three weeks the lad was in a fair way for doing well, his bodily strength unusually good after so severe an attack, and there was not a trace of marking upon his countenance.

I am, Sir, your obed't serv't,
Adam Addison.

Birmingham, Nov. 1858.

REMOVAL OF A COIN FROM THE TRACHEA.

To the Editor of The Lancet.

Sir—Presuming that the following case is sufficiently interesting and rare to warrant an insertion in your journal, I herewith forward it to you for publication:—

Mr. J. P. Cole, a professor of music, of Arundel, having by chance, on Monday the 11th inst., a fourpenny-piece in his mouth, it was suddenly drawn into the trachea. Not being able to remove it by violent coughing, he applied to a neighbouring surgeon, who administered an emetic and other remedies, but to no effect. His professional engagements bringing him the following day to Chichester, and being unable, from pain and natural anxiety, to attend to his duties, he called and consulted me on the subject. As there were no urgent symptoms whatever, I at first doubted his tale, but, on auscultation, I could easily detect the coin lying at the bottom of the trachea, just over the bronchial tubes, there being a perceptible râle, as from the presence of a foreign body, in that locality. Bearing in mind the case of Mr. Brunel, I advised a similar mode of treatment, not, however, proceeding to open the trachea, as I did not consider the symptoms sufficiently urgent to require it; but I simply placed a cushion on the floor, and placing Mr. Cole on his head, I, with the aid of my assistant, suspended him by his legs, at the same time violently striking him several times on the back, between the shoulders, with the palm of my hand. In the course of two or three minutes, during a slight fit of coughing, the coin was dislodged, and fortunately expelled from its perilous position.

I am, Sir, yours obediently,
C. Sturges Jones, M.R.C.S.

Chichester, Nov. 1858.

INJECTION OF PSOAS ABSCESS WITH TINCTURE OF IODINE.

To the Editor of The Lancet.

Sir,—I witnessed this morning, at the Hôtel Dieu, in the "service" of M. Broca, an operation the practical merits of which are not to be questioned—namely, the injection of psoas abscess with tincture of iodine. In this there is nothing novel, but as the instrument with which the injection was effected was quite new to myself and two medical friends also present, it may perchance be equally so to some of your readers.

The instrument in question is a syringe, somewhat on the principle of the stomach-pump, with reversible action, rendering it capable of either sucking or forcing. When the puncture has been made and the trocar withdrawn, the syringe is fitted to the canula, pressure is exerted on the iliac fossa, (so as to drive the contents of the abscess towards the thigh and orifice of the canula,) and the operator, with a few strokes of the piston, empties the cavity of its pus. A stop-cock in the canula is then turned, to prevent the entry of air, and the syringe, being withdrawn, its action is reversed, enabling the tincture to be injected *by the same instrument* in the usual way.

The merit of this apparatus (apart from the ingenuity of its double action and the convenience of its compactness) is the advantage afforded of enabling the injected fluid to act more vigorously on the lining membrane of the abscess than would be possible were the sac protected by its adhesive secretion; and I believe in no other way could the cavity be so completely emptied, and its walls exposed to the beneficial action of the iodine. This instrument is well known in the Paris hospitals, and, I believe, invented and manufactured by M. Mathieu, a surgical instrument maker here.

Yours, &c.
J. D. Chepmell, M.R.C.S.

Paris, Sept. 22nd, 1858.

SMALL-POX SUPERVENING ON MEASLES, SCARLATINA, AND SYPHILITIC SCALY ERUPTION.

To the Editor of The Lancet.

Sir,—In your last issue,* I find a highly interesting article, from Dr. Brooke Gallwey, of the

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* November No. p. 363.

Royal Artillery, on a case of variola which supervened on measles, as also of one on scarlatina. He adduces these cases to show that the poison of variola may coexist in the system with that of measles, and also with that of scarlatina; and that these facts negative the doctrine of Hunter, that no such poisons can coexist: a doctrine fully subscribed to by Dr. Chambers and the schools since Hunter's time. The cases recorded by Dr. Gallwey go far to question the immutability of this supposed law, and are amply sufficient to create enquiry upon a subject so full of professional interest. To these cases I may add one which gives strength to the exception taken to the law; a case of variola supervening on a scaly syphilitic eruption in a young man well poisoned at the time with the syphilitic virus.

Gunner R. S——, Royal Artillery, aged twenty, was admitted to the Ordnance Hospital at Limerick on the 20th of July, 1855, with gonorrhœa, and was discharged, cured, on the 1st of August. On the 10th of the same month he returned with an ulcer on the glans, circular, with elevated edges and hard base. This sore was well burned, and he was cured of it on the 25th. A small chronic bubo remained in his left groin. On the 28th of October he returned to hospital with this bubo, soft and sluggish, but not open, and a scaly eruption (syphilitic psoriasis) over the forehead, shoulders, and body. I opened the bubo, which, with the eruption, proceeded tardily, from the poisonous state of the system, until the 1st December, on which day he had a shivering, followed by feverish symptoms, thirst, dry tongue, hot skin, quick pulse, and pain in the back. On the 4th the skin got quite red; elevated papules appeared on the face, neck, and breast, which daily extended. On the 9th the eruption was well developed in the true characters of distinct variola. The pustule ran through its stages, and the scabs fell on the 20th.

During the invasion and development of the variolous disease, it was as curious as it was interesting to observe the scaly eruption receding before its more active and formidable rival, like the process of a dissolving view. During the whole time the bubo remained open; and its granulations could not be got to assume a healthy action until the 5th of January, 1856.

From the 20th of December, when the scabs fell off, to the 8th of January, the skin was gradually improving from the effects of the variola, and the man's strength was increasing; however, on the latter day, a papular eruption, with a few small scaly patches, appeared on the forehead, and on the 12th it was well out on the body and legs. Iritic inflammation also seized upon the left eye. It was too evident that his old enemy, the syphilitic eruption, had again made its appearance, in a new form. He made little progress towards recovery till the 16th of February; but from this date he so rapidly progressed that he was discharged from the hospital, a convalescent, on the 1st of March, having been four months an inmate under these maladies.

This young man was admitted on the 28th of October. On the 10th of November, when the scaly eruption was fully out upon him, a lad was placed in the next bed, in whom severe small-pox developed itself, causing his removal to a detached building; and on the 1st of December, as detailed, S—— showed the first symptoms of the small-pox infection. The lad's exposure appears to have been the origin of the malady in S——'s case. *Both men bore marks of perfect vaccination*, S—— having the protective cicatrix deep and well defined in each arm.

I fully reported this interesting case at the time to Dr. Maclean, Inspector-General of Hospitals, Dublin, as I conceived it was unique in its character, and entirely subversive of Hunter's doctrine, that no two poisons could co-exist in the same individual at the same time.

The features of the foregoing case are very peculiar. In the first instance, the man had his blood poisoned by a gonorrhœa, subsequent to the cure of which, in ten days, he contracted the chancre. In two months he returns with a bubo and scaly eruption, and in this poisoned state of his system, having been exposed to the variolous infection, he is seized with the disease, which dissipates the scaly manifestation of the syphilitic poison. As the small pox disappears he becomes covered with papular secondary disease; a few scales upon the forehead and characteristic iritis complicate the malady.

It is quite manifest that the venereal poison did not protect the system from the invasion of the variolous, or prevent or modify its development in this case; nor did the poison of the variola extinguish, though it may be said to have modified, the syphilitic poison. They evidently co-existed, the one remaining dormant, whilst the more virulent exhausted the stages of its career, to give place in turn to a member of the family, which originally occupied, but did not abandon the field of its operations.

Looking farther into this case, we might legitimately ask, did the scaly syphilitic disease, which evidently had its origin in the primary chancre, and which occurred so soon after the cure of the gonorrhœa, keep in abeyance its papular poison by virtue of the greater intensity of the former (adopting Mr. Carmichael's views of these relationships), until that scaly poison itself became modified by the variolous virus in such manner as to permit the introduction on the stage of the secondary papular poison of the original gonorrhœa?

Curious as is the history of this interesting case, an important fact in medical science is introduced by it to our notice, having a substantive analogy to principles deducible from the cases so ably laid before the profession by Dr. Gallwey, but pointing with a dubious significance to the proposal of M. Justin Lukomaski, of the Russian service, which would introduce the vaccine virus as a cure for syphilitic disease.

Analogous to the question under consideration is that involved in the mercurial treatment of syphilis. If it be true that mercury cures syphilis, or is administered for that purpose, by establishing a fever or irritation in the system, which has the power of dissipating the venereal irritation, it is but an assumed example of one-poison superseding the other; but every man of experience knows that neither the specific nor irritative action of mercury thoroughly eradicates the venereal poison. It may heal a sore, prevent the full development of secondaries, or disperse their manifestations; but that it has not an eradicating power, that its poison does not dissipate from the organizations or the fluids the syphilitic poison, but that they may *co-exist* and their manifestations be patent *together*, is equally true. How often have the secondary effects of venereal appeared at a time when the constitution was thoroughly under the influence of mercury—how often men have contracted the disease in the same condition, those can tell whose opportunities have afforded the examples.

In January last a driver of the Artillery was affected with chancre, for the cure of which he was salivated. While in hospital, *and under the influence of the mercury*, a rubeolar rash appeared well out upon the body, of the true type. For the treatment of these he was forty-four days in hospital. On the 26th of April he returned with secondary iritis of the right eye, was again put under the influence of mercury, and cured on the 5th of May. On the 22nd of May he came back with an extensive papular eruption over the face, body, and arms. He was put upon generous diet, sarsaparilla, and iron, and went out cured on the 2nd of June. In this case it is quite clear that the existing mercurial action did not destroy, in the system, the poison which developed the secondary rash, nor did the second mercurial action for the iritis prevent the subsequent manifestation of the papular disease. Of how many cases is this last the type?

I am, Sir, faithfully yours,
W. R. Gore, M.D.
Surgeon to the City of Limerick Infirmary.

Ordnance Hospital, Limerick.

ELECTRO-DENTISTRY.

To the Editor of The Lancet.

Sir,—I shall feel much obliged if you will insert the following facts in your journal:—

A few years prior to the Great Exhibition of 1851, Mr. Laxton registered for me the right to patent the electro-galvanic current for surgical purposes, its usefulness having struck me when asked by patients to allow them to hold chains, consisting of the metallic combination of various galvanic elements, when undergoing dental operations. Subsequently, at the Great Exhibition, I exhibited a battery, with the chain and wires, ready for the dentist's use. This I have, and it can be seen at any time.

I feel justified in saying, that no one but myself can claim the invention of the battery, whether as an anæsthetic agent or otherwise for surgical purposes; and I beg further to say, that I have notified this to the patent office, but at the same time members of the dental profession are quite at liberty to use it.

Delveil, of France, exhibited, in 1851, also an electrical machine for medical purposes; and Meinig also showed another at the Great Exhibition.

I am, Sir, your obedient servant,
G. Waite.

Old Burlington-street, Sept. 1858.

To the Editor of The Lancet.

Sir,—Having recently read, in the columns of *The Times*, several letters upon electricity in its relation to tooth extraction, in which the authors have endeavoured to prove that teeth can be painlessly extracted under the influence of that important element, allow us to offer a few remarks deduced from direct experiment upon ourselves, which tend to throw considerable doubt upon its efficacy. There is not a more satisfactory method of testing the efficiency of a remedy than by a personal trial; and, adopting that idea, we have unpleasantly convinced ourselves that to try it upon another would be anything but fair. Being in possession of a powerful Smee's battery, we alternately sat down to experience the pain-lulling effect supposed to be produced by contact with its wires. A pair of forceps were firmly secured to one pole, the other being embraced by the hand. Upon the instrument being applied to the tooth, and a mild current of electricity passed through it, a sensation not altogether agreeable, but yet not absolutely painful, was produced; the current was then gradually increased, but before the plates were two-thirds immersed in the trough the feeling was intolerable, not only pervading the tooth, but all the surrounding structures, and remaining for some considerable time afterwards. The pain caused by thrusting the instrument beneath the gum was not in any way ameliorated by the passage of the current, but could be as distinctly felt, and in fact more acutely, than if that current had been altogether absent.

It is true there are some persons to whom, under any circumstances, the shock of extraction is comparatively painless, whilst others suffer most acutely. The absence of pain in the former class might be readily attributed to the action of galvanism, had that been employed, but the effect would have been precisely similar without it; whereas the application of a current, unless extremely mild (in which case we presume it would be useless), to a nerve already racked by pain, must be positively excruciating.

If, by the aid of electricity, such an advantage could be obtained as that which *The Times* correspondents have so lately asserted, the boon would be an invaluable one both to the operator and the patient: the deadly vapours of chloroform would give place to the harmless current of the battery, and patients would no longer shrink from an operation which, though a minor one, is nevertheless rife with extreme agony: but we are convinced that no patient who had borne extraction under the influence of galvanism, and without it, would give preference to the former mode of operating, which, judging from our own feelings, only augments the misery. It may be urged that we were unable to arrive at a correct conclusion, not having submitted to the final ordeal; but we are of opinion that our test was the more satisfactory, for directly the nerve is ruptured, which must necessarily be one of the first effects of extraction, the electric current is cut off; and it is immaterial whether it be continued during the latter part of the operation or not.

We are, Sir, your obedient servants,
A. Prince, M.R.C.S.
F. Fennell, Dentist.

Harrow-road, Upper Berkely-street,
September, 1858.

ARSENIC IN DENTISTRY.

To the Editor of The Lancet.

Sir,—I shall feel obliged by your giving publicity to the following case, which ought to be made known to members of the dental profession:—

A gentleman, suffering from a decayed wisdom tooth, applied to a country dentist for advice. Instead of resorting to extraction, which is mostly preferable when the wisdom teeth are decayed, arsenic acid was copiously applied to deaden the nerve of the tooth. This process was repeated for several days, when severe spasms, vomiting, and diarrhœa came on. These symptoms resembled those where arsenic had been administered in large doses. Fever afterwards set in, attended with delirium, and it was only after extreme care and watching that the patient's life was saved. The cessation of fever left extreme debility of the system, and the parotid and sub-maxillary glands continued much swollen. At the end of eighteen months my opinion was again asked as to this case; abscesses of the jaws had come on, the hair fell off, sores broke out over the head and neck, and the sufferer's description of himself ran thus:—"I feel I shall never recover the effects of the quantity of arsenic which was put in the tooth."

Now, Sir, as the use of arsenic was copied from the Americans, and as they often resort in practice to many other violent remedies, which all dentists of experience must repudiate, it is to be hoped that the dental profession, whose education has not been medical, will consider well remedies virtually opposed to all laws of physiological science. The nerve of a tooth has ever a tendency to die when once exposed to air. Its destruction may be accelerated by simple means, such as the use of nitric acid. Morphia and caustic, in quantities of the twentieth of a grain each, may be safely applied; pain may ever be relieved with fomentations of warm water; chloroform and opium may be applied externally and internally; camphor and mastic combined may be used as a stopping; it will often ward off pain, and prepare a tooth for a permanent stopping, but sound judgment and discretion are necessary in all such cases, which too often are aggravated by constitutional disturbance and regimen.

The cases operated on this week with the electro-galvanic machine have been mostly successful. We have not operated on delicate children, and have regulated in all instances the force of shock to age and strength.

I have the honour to be, Sir, yours faithfully,
George Waite, M.R.C.S.

Old Burlington-street, Oct. 1858.

THE USE OF GALVANISM IN TOOTHACHE.

To the Editor of The Lancet.

Sir,—As the anæsthetic power of galvanism, as employed in dental surgery, is at present attracting much attention, it may be interesting to some of your readers to learn that its application, in cases of toothache, will, as far as I am, at present able to judge, instantly and effectually remove pain.

I have lately used this remedy in a bad case: the patient suffered excruciating agony, lost her rest, and was unable to attend to her domestic duties in consequence. The tooth was so much excavated and decayed, that I do not suppose any dentist would have attempted the operation of plugging. A slight touch of the conducting-wire instantly removed the pain; and its subsequent application for a few seconds was attended with complete relief, which appears to be permanent, as there has been no return of suffering for the period of five weeks which has elapsed since the operation.

I am, Sir, your obedient servant,
Charles Taylor, M. D.

Walton Lodge, near Liverpool, Oct. 1858.

GALVANISM IN DENTISTRY.

To the Editor of The Lancet.

Sir,—Instead of leaving London this autumn, I have been extensively engaged in experiments with the electro-galvanic current for dental operations. The idiosyncrasies of patients being very different, the electro-galvanic shock varies in its intensity; and I do not recommend those acted upon with difficulty to test the strength of shock necessary, in their peculiar cases, to anæsthetic purposes. From statistics, I am not far wrong in averaging adults sensible of the pain of extraction under the galvanic current at three to one; while in the cases of children up to twelve years of age the numbers may be reversed,—viz., one to three.

The following hints may not be considered useless at this moment,—viz.: Operators should consider the constitutions of their patients, and operate on none subject to epilepsy, or to disease of the heart or brain. 2nd. Medical sanction should be obtained prior to undergoing the double shock of electro-galvanism and extraction. 3rd. The intensity of the shock should be measured by the electrometer. Lastly: Practitioners should not draw and put forth hasty conclusions from a few isolated cases, but wait till such time as electro-galvanism shall have been assiduously tested by themselves, and experimented also by others fully capable of giving its merits and its failures their full and separate consideration.

I am, Sir, your obedient servant,
GEORGE WAITE.

Old Burlington-street, Nov. 1858.

IRRIGATION IN THE TREATMENT OF LACERATED WOUNDS.

To the Editor of THE LANCET.

SIR,—M. Broca, at the Hôtel Dieu, has revived of late two methods of treatment, as simple in detail as efficacious in action, but, nevertheless, nearly obsolete.

The one, originally proposed by M. Josse, of Amiens, in 1833, is that of continued irrigation in the treatment of lacerated wounds of the extremities; the other, suggested by M. Gerdy, of La Charité, consists in prolonged elevation of the limb, at an angle of 45°, in dealing with diffused phlegmon. As in none of the cases of either class which I witnessed was any other remedy applied, the credit of the more than usually rapid cure may be fairly ascribed to the means above-mentioned.

Amongst the several instances in which the "irrigation continuê" was employed, two struck me particularly as illustrations of its power in safely tiding over the period so fraught with danger to the patient—namely, the first ten days after the accident. One case was a crushed hand and arm; the other, a compound fracture of both bones of the leg, with extensive laceration. These were admitted into the Salle St. Côme, a ward rarely free from some form of erysipelas, phlebitis, or purulent infection. In the first, the irrigation was persevered in for fifteen days, during which time the process of reparation went on healthily and rapidly; in the second instance, it has been in operation for ten days as yet, and with the same excellent results, although there are two cases of erysipelas in the same ward. This immunity may be accidental, but I have noticed it in the nine or ten cases which I have seen treated by irrigation. Its mode of application is the following:—The limb, lightly bandaged, is set on a splint made waterproof by a lining of oiled silk, (a gutta percha splint would simplify matters,) and a little outlet, or gutter, is contrived in the most dependent part of the apparatus for the water to drain off. The supply is obtained from a pail hung above the bed, by means of a syphon, fitted with a stopcock to regulate the flow, and the stream trickles down a twisted band cut into strips below to distribute the fluid equally over the limb. The water in the pail is kept at an unvarying temperature, and somewhat tepid, so that these cases require constant attendance. One point to be observed is, that the treatment should be commenced as soon after the occurrence of the accident as possible, and always before (*never* after) the inflammatory reaction has set in.

As regards the cure of diffused phlegmon by position, in one case in which I saw the plan of elevation adopted, the affection was already far advanced (the sixth day) when the patient was admitted. She was a girl of eighteen; her leg was swollen to twice its natural size, of a dusky-red colour, hard and brawny to the touch, with throbbing pain, and considerable constitutional derangement. M. Broca hesitated before using the bistoury, and at the patient's earnest entreaty gave her twenty-four hours' respite, raising the limb at an angle of 45°, by means of a chair, inverted and placed lengthways under the mattress; the girth of the leg was accurately measured, and the patient put on low diet, with no medicine. Next morning, at the visit, the circumferential measurement had diminished an inch and a half, and the other symptoms had improved in like proportion. During the ensuing forty-eight hours, the amelioration was so considerable, that at the expiration of that period all treatment was suspended, and the patient pronounced convalescent. In this instance the cellular tissue was on the eve of sloughing, and as early incisions are very generally practised here, the poor girl would inevitably have had two or three parallel furrows, "scored deep and long," into a limb which is now as whole and sound as ever it was.

One of the latest novelties in Parisian hospital practice is M. Chassaignac's successful application of the écraseur to the radical cure of fistula in ano. He passes the chain along the fistulous track into the rectum, and back through the anus. The wound made in opening up the false passage with this instrument being of an irregular lacerated character, it cannot heal by first intention, and granulates up from the bottom without much trouble.

I am, Sir, your obedient servant,
J. D. CHEPMELL, M.R.C.S.

Faubourg St. Honore, Oct., 1858.

Foreign Department.

The Hypogastric Operation for Stone, aided by Cauterization.

M. VALETTE, principal surgeon to the Charité Hospital of Lyons, has recently published an essay of sixty-three pages on the above operation.

The author uses chloride of zinc paste to favour adhesion between the abdominal walls and those of the bladder. The operation consists of two stages: in the first, the bladder is reached by successive cauterizations; in the second, the extraction of the stone is effected.

The patient being narcotised, an incision about two inches long is made in the mesial line starting from the pubes; when the recti are reached, they are separated with the director. A catheter, containing a stilette armed with a trochar extremity (sonde à dard), is then introduced into the bladder along the urethra, and the point of the stilette is made to pass out of the bladder between the recti muscles about one inch above the symphysis. A platinum wire is then passed through an eye in the stilette, situated about three-quarters of an inch from its point. The stilette is then made to re-enter the bladder, and is thrust out again two-thirds of an inch lower down than the spot of its first emergence. The wire, which has reappeared with the stilette, is then taken out, the latter is drawn back into the bladder, and the catheter removed altogether.

At the bottom of the wound a piece of chloride of zinc paste, half an inch long and a few lines broad, is then placed; cotton wool is put over and fixed upon it by bringing together and tying the two ends of the platinum thread over it. A compress and a roller complete the dressing.

The chloride is removed in twenty-four hours; the eschar cautiously incised, taking care not to include the healthy structures beneath it, and a new piece of caustic is placed in the wound. Four or five such applications are generally necessary before the bladder is reached; oozing of urine is a sign that the eschar includes the vesical walls and that the cauterizing stage is completed.

The second stage of the operation is now entered upon by introducing the sharp stiletted catheter into the bladder along the urethra, the end of the instrument (acting then as an ordinary catheter) being made to emerge through the vesical aperture, which allows of the oozing of urine. The catheter is intended as a director for the introduction of the "lithotome caché." This latter instrument is then passed into the bladder through the above-mentioned vesical aperture, and the latter is made larger by removing the instrument, which cuts with the blade pushed out by the spring. When the lithotome caché is removed, the aperture may, if necessary, be made larger by means of a probe-pointed bistoury. Lateral incisions may even be made, if found desirable. The stone is then removed by means of the gorget and forceps.

M. Malette has operated in this manner upon four boys, and with complete success; one of the patients having, however, died some time after leaving the hospital, from adynamic intermittent, the wound being quite healed and micturition normal. The ages were respectively five, seven, eight, and ten years. The urine passed entirely through the urethra in from sixteen to twenty-one days after the operation; and the wound of the abdomen was healed, on an average, towards the thirty-fifth day. The first two patients were kept under observation nearly two months after the closure of the wound; their health improved all the while, and the vesical contractions seemed to be effected with as much vigour as before the operations. The author concludes with these sensible words: "The path is now open; it is to be hoped that other surgeons will engage in it, and that facts will soon be numerous enough to enable us to judge definitely of the value of the hypogastric operation for stone, performed with the assistance of cauterization."

Forcible Straightening of the Limb in the Treatment of Hip Disease.

M. Bonnet, of Lyons, well known from extremely valuable works on the diseases of joints, has communicated to the Academy of Medicine of Paris a mode of treatment of hip disease which is described as follows:—

"Acute or chronic inflammation of the hip-joint is necessarily connected with malposition of the limb, the most frequent kind being flexion of the thigh on the pelvis. This flexion is generally accompanied by rotation inwards and adduction or rotation outwards and abduction. The same therapeutical measures are applicable to either case. These measures may be subdivided into three stages: 1, the constitutional treatment; 2, the local treatment; 3, the initiatory mechanical treatment, which consists of more or less violent tractions and rotations intended to rectify completely and instantaneously the malposition of the limb whatever be the degree, cause, or duration of that malposition. The manipulations must necessarily be aided by anæsthesia, and should be undertaken with prudence and caution, as they often require much time and muscular effort on the part of the operator." M. Bonnet acknowledges that his method is not invariably successful, and that counter-indications to its use may occur; but he applies his mode of forcible straightening in most cases of hip disease, from the very acute variety where pain is excessive, to the indolent variety where the disease has lasted months and even years. He makes, however, no attempt where true or false anchylosis has taken place, and where, even in a state of anæsthesia, articular movements are completely abolished. When subcutaneous muscular sections are required to complete the perfect straightening, M. Bonnet performs them on the adductors and glutæi. These sections are sometimes of formidable extent, but no unpleasant symptoms have ever occurred in his hands. This straightening is, according to the author, only a preliminary step in the curative treatment, the principal object being, to keep up the extension and symmetry of the parts. To obtain this end, M. Bonnet trusts to the starch immovable casing first, and to grooved splints afterwards. The mechanical contrivances in general use are, according to the French surgeon, useless; and much stress is laid by him on the necessity of applying the starch and pasteboard apparatus with sufficient care, and to continue its use a long time for fear of relapses. Cauterizations may be used under the casing, and patients are made to walk on crutches some days after the operation.

This forcible straightening of limbs has, in this country, been for some years extensively used as regards diseases of the knee-joint, and with some success. We have no doubt (especially as M. Bonnet cites some cases of cure) that a similar treatment applied to the hip, with caution and a careful selection of cases, may yield some favourable results. M. Bonnet's cases are especially valuable as showing that forcible straightening may be undertaken in very acute hip disease, without fear of unpleasant complications, and with a very fair chance of allaying pain completely, and of restoring the proper shape of the joint.

New Modes of Administering Iodine.

Efforts have lately been made in France to administer iodine in a more efficacious manner than had hitherto been done. M. Leriche, of Lyons, has published valuable articles in *L'Union Médicale*, wherein he endeavours to show that iodine, combined with vegetable substances, advantageously replaces cod-liver oil. He proposes a syrup made of the juice of water-cress and iodine, and also an iodine wine. The syrup has the advantage of not fermenting, and contains exactly one grain of iodine per ounce. The wine is composed thus:—Bordeaux wine, eight ounces; concentrated infusion of red roses, about thirteen drachms; tincture of iodine, one drachm and a half. Each ounce contains one grain of iodine. From one to six tablespoonfuls may be given daily, according to the indications and the age of patients. In the space of three years M. Leriche treated 38 scrofulous patients with the wine; 21 were perfectly cured after a treatment steadily pursued for some time; 8 did not improve at all; and 9 improved but slightly, either because the treatment was carried on imperfectly, or because it was left off too soon.

M. Boinet, on the other hand, well known by long-continued investigations respecting the use of iodine, read, on the 28th of September last, before the Academy of Medicine of Paris, a paper, in which he proposes to use iodine as an article of food. The author administers iodine as found in nature—viz., combined with those plants which contain the greatest quantity of the alkaloid. The latter being thus given in minute doses, in a continuous and almost imperceptible manner, yields most advantageous results. M. Boinet uses fuci, marine plants, cruciferæ, salts containing iodine, and some mineral waters holding iodine in solution. His excipients are, ordinary bread, ginger-bread, cakes, biscuits, chocolate, wine, beer, syrups, &c., some being especially calculated for children. Trials were begun by M. Boinet as far back as 1849, upon subjects suffering very severely from the various well-known scrofulous symptoms, and most of them were cured after continuing the iodized food for several months. The author has not found that iodine administered for a long time produced loss of flesh and atrophy of certain organs. Far from having these effects, the iodine, in his hands, has invigorated patients, and favoured the development of organs. Messrs. Chatin and Trousseau are to report upon the paper.

Fixed Position of the Globe of the Eye in Ophthalmic operations.

M. Larghi, of Vercelli (Piedmont), has succeeded for several years past, in obtaining perfect steadiness of the ocular globe in operations, by seizing the superior rectus with small forceps, and passing, by means of a flat needle, a silk tape under the muscle. The tape is then used for steadying the eye, or guiding the ocular globe in any desirable direction. In some cases, the immobility of the eye is procured by taking hold of the inferior rectus. M. Larghi does not say whether unpleasant inflammatory symptoms ever followed his mode of steadying the eye. He found extraction very much facilitated by pulling the globe forward with the tape.

Deep Subcutaneous Cauterization by means of Sticks of Caustic introduced into the parts to be destroyed.

M. Maisonneuve, a very enterprising surgeon of Paris, lately read a paper before the Academy of Sciences, in which he advocated what he calls shaft cauterization. The operation consists in destroying tumours and outgrowths by thrusting into them little pointed sticks or shafts of dried chloride of zinc, mixed with flour. When the tumours are very tough and hard, openings with the knife must be made for the passage of the shafts. Deep-seated tumours, difficult of access, as those of the axilla, the groin, or the neck of the womb, are the best suited to this kind of cauterization. The author considers that his method ought to be substituted for the knife, to avoid the dangers of hæmorrhage and purulent absorption.

HOMŒOPATHY AND THE NATURAL HISTORY OF DISEASE.

A few years ago, when the quackery of globulism was evincing much anxiety as to what might be its fate under the opposing influences of table-turning and spirit-rapping, whose stars were then just rising in the firmament of popular delusions, some crotchetty and disappointed members of our own profession undertook to soothe its complaint. "You are not quite the thing we wanted," said they, "so go you must; but had you made pretence to a little more science and to much less *hocus pocus*, it is not impossible that we might have joined your ranks. However, we cannot do this, nor can we save you, but we will carry down your memory in a new school we are about to found, to be called the School of 'The Natural History of Disease.'" So the school was founded, and erected a tablet within its porches to the memory of Homœopathy, and to the glory of the "do-nothings" in the treatment of disease. But the new school, it appears, was wrong in two points: in the first place, it killed homœopathy a little too soon; and, in the second place, it misjudged the truth and importance of its own doctrines. They were a little talked of at first, but naturally made no true progress, for the profession generally were at a loss to know how any conscientious and faithful physician, believing he had at command remedies of obvious and valuable aid, could refuse their benefits to a patient, for the purpose of testing whether or not the unaided powers of nature were sufficient to remove the disease. Here and there a few queerly-constituted minds did practise, it is true, according to the "natural history of disease," with what result let the following statement inform our readers:—

> "We once had an opportunity of studying 'the natural history of disease' in a case of paroxysmal fever of the west. It was in the onset a simple, uncomplicated case of *malarious fever*. We had seen such diseases treated by pepper and steam, by cold baths and warm, by emetics, cathartics, quinine, arsenic, strychnine, and Indian cholagogues, but never before by infinitesimal doses of sugar. We made accurate note of it at the time, and published it for the benefit of those interested in the study of the *natural history of disease*. The patient, a valuable citizen, died. On his tombstone might have been appropriately written—
>
> "'Died for the want of thirty grains of Quinine—
> a victim to the dreamy speculations
> of Homœopathy.'
>
> "We had in this case, it is true, the rare opportunity of studying 'the natural history of the disease,' but unhappily our knowledge was embittered with the thought that it was at the expense of valuable life."*

Now, just such an opportunity as this has unmodified homœopathy afforded some of our professional brethren at Norwich within the last few weeks. Messrs. Cadge, Dalrymple, and Crosse, have been witnesses to the painful course of events which follows when a strangulated inguinal hernia is not timely assisted by art, but left to the ignorance of homœopathy, with its "teaspoonfuls of something," "beef-tea," injections, and cold water. The main facts of the case are these: Charlotte Ada Tuck, aged seventeen years, had been well until the morning of the 27th of September, when she was seized with frequent vomiting and pain in the abdomen. On the following morning a Dr. Hartmann was called in, and prescribed infinitesimally. The symptoms continued during the next three days, and on the evening of the sixth day (2nd October) the vomit became stercoraceous, and the aunt, on undressing or washing the patient, discovered in her groin a swelling as large as a full-sized hen's egg. Soon afterwards the "*doctor*" came, examined the tumour, and went away; came again later, and *considered her better*. On the following day (the 3rd), he called early, bringing with him another of the same persuasion, a Mr. Holland, and between them they came to the conclusion that it would be expedient to apply cold water to the tumour. During the next few hours she could not partake of anything, on account of extreme sickness. On Tuesday, the 5th, she seemed less sick, and was told to take beef tea, "as the symptoms were so favourable." She attempted to obey, but was sick as soon as she swallowed; stercoraceous vomiting again set in. The attendants then wished for "further advice," as they "were fearful an operation must be performed," and proposed a surgeon, to whom the uncle and guardian of the girl objected, stating his desire that Mr. Cadge should be sent for. The homœopaths withdrew, and Mr. Cadge on arriving recognised an operation as promising the only hope of safety; but on performing it, with the assistance of Messrs. Dalrymple and Crosse, he found the intestine already gangrenous and ulcerated through. The poor girl, of course, soon died, and a post-mortem examination disclosed feculent matter in the cavity of the peritoneum, and violent inflammation of that membrane.

This case truly exhibited the horrors of homœopathy, and the "natural history of the course of the disease." What the jury thought of it, after their lengthy *sederunt* over a piece of business, to our minds, "as plain as a pike-staff," must be gleaned from the following verdict:—

> "Charlotte Ada Tuck died by the visitation of God, and the jury cannot separate without expressing their regret that Dr. Hartmann did not discover the nature of the disease."

An admirable specimen, like the globulists' practice, rather of the *suaviter in modo* than of the *fortiter in re*. It is, indeed, truly to be regretted that this Dr. Hartmann did not, as the jury said, discover the nature of the disease. With the progress we hear talked about, the enlightenment of the middle-classes, and the civilization of the age, the public surely should be able to discern some connexion between cause and effect—some difference between the careful application of assiduous study and the hollow vauntings of a system of pretended safety, whose sole immunity consists in its utter ignorance of disease, and the consequent leaving of a malady to run on to the destruction of the patient!

New Inventions

IN AID OF THE

PRACTICE OF MEDICINE AND SURGERY.

ELECTRICAL BATTERY FOR DENTAL SURGERY.

Messrs. Lemale have just invented a very portable and easily-applied electric battery for dental surgery.

The electric battery combines the widest range of powers for all medical purposes, and is applicable to every case in dentistry, its strength being graduated by a movable lever. The instantaneous transmission of the electric current to the instrument, when adjusted to the tooth, is effected by the novel contrivance of the foot-board, on the ivory button of which the operator presses his foot at the moment of extraction.

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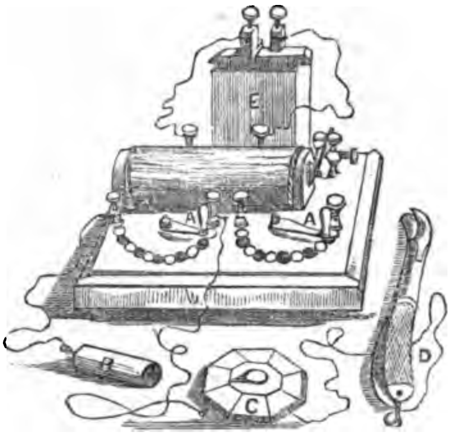
* The North American Medico-Chirurgical Review, September, 1858, vol. ii., p. 804.



A A, Movable levers, primary and secondary, for regulating the strength of the current.
B, Brass contact-handle.
C, Foot-board for completing the circuit.
D, Extracting forceps.
E, Cell and battery.

Reviews and Notices of Books.

A Manual of Obstetrics, Theoretical and Practical. By WM. TYLER SMITH, M.D., M.R.C.P., Physician Accoucheur to, and Lecturer on Midwifery at, St. Mary's Hospital. Illustrated with 185 Engravings. London, [illegible]HN CHURCHILL. 1858.

A SYSTEMATIC treatise on Obstetrics has long been wanting to complete Mr. Churchill's series of manuals. Students and junior practitioners have at length the welcome addition to their store of compendious medical literature of a work which brings both the science and art of midwifery up to the discoveries and rulings of our own immediate day. The substance of this work consists of the Lectures published in THE LANCET of 1856.

Several years ago, Dr. Tyler Smith published a book on Parturition, devoted almost entirely to a rigid application of Dr. Marshall Hall's discoveries to the theory and practice of obstetrics. The ingenuity of this work placed its author at once in the first rank of obstetricians, and at the same time distinctly marked out an epoch in the history of widwifery. It reduced the empirical rules of the older obstetricians to definite scientific formulæ, and gave to the *disjecta membra* of an art which proceeded by rule of thumb, the dignity and unity of an art based upon true science. These great merits, however, added to an eloquent manner of exposition, and fortified by the ardent enthusiasm of strong scientific convictions, did not make Dr. Smith's work either popular or successful. Ostensibly addressed to one class of readers, it really had its public in another class, and, like all works which break up new ground, excited the admiration, not of those who were making the first painful efforts to scale the heights of knowledge, but of those who, having gained no small elevation, could discern something of the vast unexplored regions which lay around them. Students, who want a sober exposition of what is well known, could not swallow this octavo Hymettus, and hence the work on Parturition was never a student's book. It found its way into the libraries of accomplished men far and wide, as a scientific poem, but to the million it was caviare.

Notwithstanding a previous effort, therefore, Dr. Smith had still a public to address, and he has taken advantage of his opportunity in a manner which deserves the warmest thanks of all students of the obstetric art. Innumerable as are the sources from which the materials of the work are drawn, it bears, nevertheless, that stamp of unity which marks out the master from the mere compiler.

It is, of course, impossible here to give an elaborate analysis of the work before us. It must suffice to indicate the general scope, touch upon two or three of the salient points, and notice those parts which appear, as it were, to invite criticism.

In reviewing a treatise which professes to be *systematic*, it naturally occurs to us to examine the *system* of the author. If we require at the hands of the writer of a monograph that his facts and arguments shall be arranged in their proper logical sequence, it is still more imperative that he who professes to write systematically, should unfold his subject in such a manner as will best fulfil the end and aim of teaching. In the preface to his work, Dr. Smith states that "an attempt has been made to follow a natural method," "placing those subjects which mutually illustrate each other as nearly as possible in juxtaposition." Within certain limits this is a good method of arrangement, but we must demur to its application to a mixed subject like midwifery, for the simple reason, that the scientific elements of which it is made up are dependent upon, and not illustrative of, each other. Physiology of one part illustrates physiology of another, and anatomy of one organ illustrates anatomy of another; but anatomy no more illustrates physiology than the alphabet does Newton's Principia, or the Arabic numerals Mr. Babbage's calculating machine. If midwifery had been a subject *per se*, *totus teres atque rotundus*, the attempt to apply a natural method might have been commendable and successful, but the want of unity is an insuperable objection to Dr. Smith's plan; the parts, moreover, of which the whole is composed, do not bear to each other a relation of the kind which admits of a natural treatment, so that the method is faulty, not only on account of the absence of unity in the subject, but by reason also of the diverse nature of the elements which compose it. The relation which subsists between anatomy, physiology, pathology, and medical and surgical therapeutics, is not one of mutual connexion and illustration, but of dependence in the exact sequence in which we have named them. The inevitable consequence of an injudicious attempt at what is not possible, has produced defects in the arrangement of Dr. Smith's book which will be obvious as soon as they are mentioned. The anatomy and physiology of the internal organs of generation in the female is twelve chapters earlier in the book than that chapter which treats of the gravid uterus, while midway between these subjects is a chapter devoted to the signs of pregnancy, and another on the disorders of that state. To our minds this is dislocating subjects from their proper connexion, and introducing confusion under the plea of increased perspicacity. Again, the anatomy of the pelvis is not given until after such subjects as constitute nearly the whole of the physiology which enters into obstetrics, and immediately succeeds a chapter on the duration of pregnancy. And not to multiply instances further, "the induction of premature labour" is nearly at the end of the book, between a chapter on phlegmasia dolens and another on turning, instead of being, as we humbly conceive it ought to have been, even on Dr. Smith's own plan, treated of in connexion with abortion, inasmuch as it is nothing more nor less than *artificial* abortion. From the foregoing remarks, it is evident that we should have preferred to see the anatomy of the subject disposed of first; the construction of the theatre in which the events of parturition and reproduction take place is obviously the alphabet of obstetrics, and should be presented to the mind first, just as surely as the axioms and definitions of Euclid precede his problems and theorems. Physiology, again, being the normal action of the machine whose construction has just been examined, should immediately follow anatomy, instead of being scattered hither and thither according to an assumed natural association with other parts of obstetrics; while pathology and therapeutics should go hand in hand, as the only rational method of teaching the theory and practice of midwifery. Without at all intending to detract from the merit of Dr. Smith's work, which is great, we cannot but think he has given us in it an apt specimen of "L'art de s'égarer avec méthode."

The excellence which we have denied to the plan of Dr. Smith's work does not, however, fail to be conspicuous in many of the individual chapters. The opening chapter on "Generation" is admirable, both for its philosophic comprehensiveness and for the lucidity with which it is written. In this instance the author has vindicated his claim towards illustrating one part by that which is in immediate juxtaposition with it. But then this is altogether in *one* domain—viz. that of physiology. All the physiological chapters, in fact, are very good. In speaking of the causes of abortion, it is left rather doubtful whether some of them act immediately, or by the production of states which interfere with the nutrition of the fœtus. With regard to syphilis, for instance, it is stated that it is one of the pathological states inimical to normal gestation; but whether by inducing morbid states of the maternal organs or of the contained ovum, is not specified. Our own experience points almost entirely to states of the fœtal appendages as producing fœtal death in connexion with syphilis. The *modus operandi*, again, of some of the causes of abortion is not entered into, and the instance given of ergot as a spinal centric oxytocic is, we believe, altogether incorrect. The action of ergot as a hæmostatic in epistaxis and hæmoptysis, and in hæmorrhages from the virgin uterus, can hardly be ascribed to stimulation of the spinal cord. These facts, and the rhythmical (though morbidly so) contractions of the uterus under the action of ergot, point to the sympathetic as the system of nerves influenced by it; not to speak of its well-known influence over the processes of nutrition when taken into the economy for any prolonged period. Strychnia, again, is not referred to as possessing that disturbing influence over the contents of the gravid uterus which it has recently been shown to exert. This section, indeed, excellent though it be, might be expanded with advantage. The student cannot do better than to study most diligently the exposition which Dr. Smith gives of the nervi-motor functions of the uterus. It is the key to nine-tenths of the cases of abnormal labour which come under the practitioner's notice in large communities. A thorough knowledge of all the numerous factors which go to make up the sum of uterine nervi-motor action will be the "open sesame" to what are otherwise the hidden arcana of cases which are too slow, too fast, too spasmodic, or too feeble, for reasons unknown; and how far success in the practice of midwifery depends upon such knowledge, those can best tell who have passed from darkness into light.

Space will not allow us to do more than refer to the chapters on the "Pelvis" and on the "Mechanism of Labour." The pelvis and fœtal head are described with an exactness and lucidity which render it entirely the student's own fault if he does not gather from the text a vivid and permanent conception of both the one and the other; and not only of their parts and specific forms, but of their mutual relations when placed the one within the other. The mechanism of labour is illustrated by diagrams which are quite original, inasmuch as they represent the fœtal head in the four principal positions *seen from below*, and the spot touched during an examination, when the head is just engaged in the pelvis, is indicated by an asterisk, thus giving the student a very material help towards comprehending the actual state of parts at the time, and one which is, moreover, as far as we aware, as novel as it is useful. There are other diagrams, which demonstrate the progressive changes in the presenting parts as labour advances, which are conceived with great ingenuity and will prove of great service to the young obstetrician.

The articles on "Deformities of the Pelvis" are both elaborate and clear; and Dr. Matthews Duncan's diagrams, illustrative of the differences between the rachitic and malacosteon pelves, have been unravelled and presented, one by one, with great skill and clearness. Dr. Tyler Smith's speculations upon the origin of the obliquely-distorted pelvis deserve attentive perusal by both young and old, and appear to us to convey a larger share of truth than any former writer has succeeded in elucidating, though neither labour nor genius has been wanting in those who have investigated this pathological crux.

There is necessarily an infinity of points upon which discussions might be raised, in a work which is not only so copious, but so completely imbued with the advanced physiology and pathology of the day. Much that it contains must be true, and fitted to stand the test of time; but *finality*—to borrow a political phrase—is neither the object of an author nor to be expected by the student. Science progresses, and truths are only approximative; but the volume before us, at any rate, contains more of this approximative truth than most of its contemporaries, and being undertaken and executed in the true spirit of science, will, from time to time, be capable of such emendation and adaptation to new discoveries as will long render it the favourite and honoured guide of the English student of midwifery.

News Items, Medical Facts, &c.

THE LAST OF THE (QUACK) BARONS.—Baron Spolasco, a quack doctor, well known in Gloucestershire and South Wales, recently died in New York. The Baron, whether truly or not we cannot say, used to parade in his bills, in the way of recommendation, that he had escaped from the wreck of the *Killarney* steamer, and by a grand appearance and great impudence, he contrived to get a great many dupes, and to make a great deal of money. Frequently he made his appearance in a carriage drawn by four horses, with postillions, hired to make a sensation; he was the pink of fashion in dress, but occasionally wore a mountebank costume. His humbug, however, lasted only for a season, though it was a pretty long one, and he then took his departure for the United States, and here he seems to have fallen into poverty before he "shuffled off this mortal coil." "His first official appearance here was majestic," says the *New York Daily Tribune*; "an office under the St. Bobolink Hotel; clean kid gloves; out driving every day; the coronets on the harness replated; the brims of the hat curling like the top of a Corinthian pillar. This lasted a short time, when some difficulty about rent occurred with his landlord (an unreasonable person), and the Baron moved a little higher up Broadway, and a little lower down in the scale of appearances. From this time he kept continually changing his residence, which grew smaller and smaller every time—and then he disappeared altogether."—*Cheltenham Examiner*.

A TRANCE.—A sensation has been caused at Nuneaton, Warwickshire, in consequence of a young woman of that place having come to life after her apparent death. Preparations were made for "laying her out," the bell tolled, and the shutters were closed, but in a few hours after her supposed death, she became warm, and ultimately convalescent. She states that during the time she was in the trance, she could distinctly hear the conversation of those near hear.

TABLET TO THE MEMORY OF SIR ASTLEY P. COOPER, BART.—A very handsome tablet to the memory of this illustrious surgeon was fixed on Wednesday last, in Guy's Hospital. It is formed of the purest Carrara statuary marble upon a dove marble back, and is the work of the eminent sculpture firm of Edwardes Edwards & Co., of Newman street, Oxford street.

In Memory of
SIR ASTLEY PASTON COOPER, BART.,
for twenty-five years
Surgeon of this Hospital,
who died on the 12th February, 1841.
aged 78 years.
By his own particular desire,
his remains have been deposited
in the vault below,
within the precincts of the institution
in which he received his professional education,
and which,
having contributed to the development,
enjoyed the benefits, and shared the lustre
of those remarkable talents
which won for the professor
the undisputed title of
the first surgeon of his age.
To mark the resting-place of
so distinguished a man,
and to evince their sense of
his services to the hospital,
the Governors
have caused this tablet to be erected,
on the occasion of
the repair and decoration of the Chapel,
in the year of our Lord,
1858.

CONSUMPTION OF TOBACCO IN FRANCE.—In an article published by the *Presse* against the use of tobacco in France, the following statistical information is given;—"The consumption of tobacco increases in France most rapidly. The sale brought, on an average, a nett revenue to the Treasury, in the last years of the Empire, of 26 millions a year. In 1820, the produce was 42 millions; in 1841, 72 millions; and in 1856, 121 millions. Each inhabitant in 1820 consumed in the year, on an average, 352 grammes (500 to the pound); in 1841, 480; and in 1856, 706."

SUICIDE OF A MEDICAL PRACTITIONER.—The "Moniteur du Calvados" mentions the suicide, at Evreux, of Dr. Hardouin, of Caen, who put an end to his existence by cutting his throat with a razor. He had been present in the evening amongst his friends, and appeared to be in his usual state of health, talking with those around him in very good spirits. On leaving them, he took the train at Caen for Evreux, where he committed the fatal act. The deceased was President of the Horticultural Society of Caen, and was universally respected.

New Tribe of Aborigines, without Hair.—The discovery of a new tribe of aborigines is thus reported in the *Sidney Empire*:—"A gentleman who, in May last, was at a remote station down the Balonne, called Gooee, about 100 miles below Surat, fell in with four blacks, who had come to that part of the Balonne a few days previous, and who appeared to belong to a tribe unknown to white men. They presented the remarkable peculiarity of being entirely without hair, and they stated that neither the males nor females of their tribes had hair on their bodies at any period of life. The complete baldness gave them a strange unearthly appearance, at which it is said the Balonne blacks were at first very much terrified. These aboriginal strangers said they saw white men's bones and equipments beyond the river Barrow or Warrego, from which they had come. It is conjectured that these remains may be those of Leichardt and his party, and we believe the whole particulars have been communicated to the government, with the view of a fresh search being made to clear up the mystery of the long missing travellers."

A Rare Blossom.—In the Botanical Gardens of the Regent's-park, an American aloe may now be seen in full bloom. The plant is upwards of 120 years old, and has not before exhibited a bud. The last instance of the kind, at the same gardens, occurred in 1849.

Lunatics in Ireland.—By the report of the Commissioners, it appears that the number of patients in the various asylums amounted, upon the 1st of January, 1857, to upwards of 9286. Despite emigration, &c., the lunacy returns show an annual increase.

New Remedy for Gout.—The "Abeille Médicale" mentions the oil expressed from horsechestnuts as a specific for gout. The oil, well rubbed in, exerts at first a painful, but rapidly a sedative, effect: lint and oil-skin are then applied to the affected part. Evaporation is checked as much as possible, and perfect repose enjoined upon the patient. The treatment is said to be most successful.

A Doctor Killed by a Lunatic Patient.—A dreadful accident has just produced a most painful sensation at Mons, in Belgium. A medical man named Huart, who was accustomed to receive boarders in a maison de santé, had under his care a male patient afflicted with religious madness. As the man, however, was inoffensive in his manners, he was allowed a certain amount of freedom within the premises. Some days back, eluding the vigilance of his keepers, he contrived to get possession of a knife, and neither remonstrances nor entreaties could induce him to give it up. M. Huart, being informed of the circumstances, went to the patient, and in an authoritative tone insisted on his laying down the weapon. The other positively refused, and on M. Huart approaching to seize it, the madman suddenly rushed on him, and before any of the servants could interfere, stabbed M. Huart several times with tremendous force. One of the wounds proved mortal, and a few days ago the unfortunate gentleman expired.

A Specific for Scabies.—At the last meeting of the Academy of Sciences, Paris, M. Bonnet, of Epinal, sent in a paper, announcing that benzine is a specific for the itch. The author of the paper states that if benzine be rubbed on the parts affected, and also very slightly on the other parts of the body, a cure will be effected in the course of five minutes, after which time the patient may take a warm bath for half an hour. Nevertheless, in cases where the itch is accompanied with a secondary eruption, the latter will require a separate treatment.

Statistics on the Prevalence of Rickets at Dresden.—Dr. Küttner states, that rickets is extremely common in that city. Out of 9000 patients admitted into the Children's Hospital for the last twenty years, 1654 were rickety or had been so, the latter presenting unmistakable traces of the disease. Thus it would appear that the proportion of rickety children was 20 per cent.; and by leaving out from the total number of 9000 such children who were less than one year old, and could not as yet be affected with any symptoms of rickets, the proportion rises to 25 per cent. Dr. Küttner thinks that the cause of this state of things is the wretched condition of the labouring classes of Dresden, as that city is not worse off, in a hygienic point of view, than other capitals. It is rather remarkable that out of these 1654 rickety children, 198 belonged to journeymen shoemakers, and 162 to journeymen tailors, being 25 per cent. of the whole number. Twins and children prematurely born were rather numerous. As to age, it was found that the largest number were from two to three years old. The influence of the mother's milk does not seem to have been well marked; for 387 had not had the breast, or had been suckled but a very short time; 360 were nursed for the ordinary period; and 455 for a longer time than usual. As vaccination has been accused of inducing rickets and scrofula, it will be interesting to notice that out of 1258 rickety children, 759 had not been vaccinated; 491 had undergone the operation; and 35 had had the small-pox. The winter months were noticed to bring the largest number of rickety children into hospital. Dr. Küttner finally considers that rickets may be owing to the early use, with children, of much bread and potatoes.—*Journal für Kinderkrankheiten*, Nos. 7 and 8, 1858.

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